

MIND

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OF

PSYCHOLOGY AND PHILOSOPHY.

I.—SOME REMARKS ON MEMORY AND INFERENCE.

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Ambiguity of Memory—How do we think at all of the past?—By a construction—This explained and objections answered—No merely successive association—Difference between memory, fancy, and thought—Mere imagination, what?—Inference, what?—Defect of internal necessity in the former—Superstition about “abstract” refuted—Memory and inference agree and differ, how?—But memory involves inference—Its relation to inference in the lower sense—How is memory distinguished from mere imagination?—Memory’s veracity—Memory and belief—The meanings of “matter of fact” in connexion with memory and mere imagination.

My object in this paper is to discuss certain questions about the nature of memory in connexion with inference on one side and mere imagination on the other. I have been led to write it partly from a desire to explain and justify the position which I took elsewhere. But the reader need not concern himself with the matter from this point of view, and I shall endeavour to treat the subject independently. On the other hand, even if I were able anywhere to deal satisfactorily with all the problems involved in the subject, the present limits are much too narrow. I can offer no more than a discussion imperfect at the best, and in which the reader must not expect to find anything really new.

We may notice first the well-known ambiguity of the word “memory”. I have used, and shall use, the term in what seems its proper sense, the consciousness of past events as having been in fact experienced in my past. But memory is often employed otherwise. It may be taken to embrace all recognition and sense of familiarity, to cover persisting after-sensation and resurgent images, sporadic and undated.

It may be a general head which includes all retentiveness and reproduction, and may be enlarged to cover every habit, even where habit rightly or wrongly is applied to a case of mere physical mechanism. And hence nothing is easier than to defend memory as basal, if not as quite ultimate, and to refute the true view that it is a complex and late phenomenon. If, however, we keep in mind its various senses, less labour may be wasted.

Memory in its proper sense seems certainly complex, and involves a high degree and development of thinking, and memory for any sound psychology must be derivative and secondary. We may find it for the moment more convenient to postulate a faculty inexplicable and ultimate, by which I know my past events isolated or even in their synthesis with my present, an organ which gives us really the really existing past, or somehow immediately reports to us that which perhaps really does not exist—an oracle, which, although inexplicable or even perhaps because inexplicable, is to be accounted veracious. But the path which seems easy may be long in the end when it involves us in confusion, and a miracle, however cheap, in the end is dear when it entails the subversion of principle. And if against fact we are led to postulate the veracity of memory, that postulate, as I shall show, leads to ruinous scepticism.

Memory is an ideal construction of the past by which the present reality is qualified, or we know the past as an enlargement by ideal content of reality beyond the present. In this respect memory does not differ, it will be urged at once, from at least some inference and even from fancy. But without at present touching on these differences it will be better to ask in general how we are able at all to think of the past. There is, of course, the further question as to what in the end is the real nature of the past, but that question fortunately does not concern us here. We are to ask about the past simply so far as it is for us.

Now there are doctrines which I must take for granted without explanation or discussion, and all that I can here do is to try to state them so as to avoid unnecessary objections. If the reader finds that he dissents, I would ask him to consider this paper as written for others. We must first of all presuppose retentiveness and the growth of associations, the formation in other words of special dispositions to restore elements previously conjoined; and it is better to abstain here from the least attempt further to explain or formulate these doctrines, since that would involve us in controversy and in the discussion of some obstinate diffi-

culties. Here I would add merely that I have presupposed nothing except that which I take to be present in principle at the very lowest level of mind.

Now, so much being assumed, it is no great step to advance from it to serial connexions. Wherever A tends to call up B and B to bring in C, A being present will tend to produce the series A-B-C. The means and the condition of this mediate connexion is the identity of B. There is here a common link which is one and the same, or which at least somehow behaves as if it were so, and which also again on examination seems so. Without this identical link there is certainly no series at all, but how far its identity must be perfect is a further question to be considered later. And at this point there arises the difficult and most important problem about the unity of the whole series, a problem at which I shall be able to do no more than glance.

But when once we have such series joined by common links, it seems easy from this point to proceed to the future and past and to transcend the present. For given the disposition to an ideal series such as *c-d-e*, and given on the other side a present qualified as *A(b-c)*, there is, through the identity of *c*, a transition from *A* to *e* through *b-c-d*. And with this transition memory, it might be said, is at once explained. Now in principle I think memory is so explained, and the explanation is correct, but it on the other hand is insufficient, and takes no account of serious differences. For in the first place memory has perforce to go backwards if it is to reach the past, while our series, it seems, run all the other way, and we can only think forwards. And in the second place memory is certainly not the *mere* extension of the present. It gives us rather something which is *not* the present, something which is known as different and incompatible. I will proceed briefly to discuss these two difficulties, beginning with the second.

To know the past or future as such is a hard and late achievement of the mind, for it implies an enormous degradation of the present. We do not properly represent the past or future until we have gained an order of things in which the present has become but one thing among others. These other things, not the present, are not presented, and, if by a miracle they were so while the present itself still remained untransformed, the result would be chaos. But past and future do not and cannot exist for us until reality appears as a series in which the present has sunk and has become but one member among others. Such an order is an array into the ranks of which the present is cashiered, it is an order

which is ideal and yet real, which is often not practical except remotely and indirectly, and which can conflict sharply with our presented perception and our presented need. The passage to this new world is the barrier, if there is one, between the animal and the human mind. The animal mind (I am here compelled to be dogmatic) has neither past nor future. It has no world but the reality felt present and given, a present qualified ideally and qualified incompatibly with itself, but never transcended and itself degraded to be but another qualification. It has ideas assuredly and from the first, and, if it had not ideas, it could most assuredly have no conation or desire. But the ideas of the animal mind are but adjectives of the given, ideas that enlarge the given and may indefinitely distract it, but never set themselves up beside it as other and equal realities. Hence the animal could never say, Yesterday I was sad but I shall be happy to-morrow. Its present is clouded and is brightened by the movement of its ideas, but remains always its present; its revenges are never retribution for the past, and even its plans, where it has plans, are no forecast of the future. It has, in brief, no world sundered from the world of its immediate practical interest, and to take an immediate practical interest in the past as past is surely not possible.

I regret to be unable to explain and defend this brief statement. It may serve, perhaps, to point out the interval which in my judgment separates memory from the lower level of mind. How in detail that interval is filled up and crossed I cannot here discuss. I agree that it is the use of language for social needs which is the principal agent. It is in this manner, I agree, that in fact we gain a world of ideas beyond, and in part incompatible with, our personal world, an ideal order which seems fixed and independent and which subordinates the present. On the other hand, I must demur to the conclusion that without society no such ideal world is in principle possible or could slowly be fixed by the mind. But, however it may have arisen, it is this ideal order which makes memory possible, and apart from this development to postulate memory is to invoke a senseless miracle.

I will pass next to the difficulty which arises from the direction of our thoughts. The past lies behind us while, it seems, we can only think forwards. Given the disposition to an ideal series $b-c-d$, then, if Xb is presented, the identity of b can develop X ideally as $Xb-c-d$. But if, on the other hand, Xd is presented, how are we able to arrive at $b-c$? Our sensations, we may say, come wave on wave out of the future and disappear backwards into the past, while the

direction of our ideas is naturally opposite, and our associated series, usually if not always, run from the present to the future. We, to maintain our being, must face and must meet with our ideas the incoming waves, and it is this practical attitude against the course of mere events which gives the direction to all our series. I do not, indeed, admit that all our associations are practical, and that is a question I pass by. But the rule that usually they are directed forwards we must admit as true, whatever we may think as to possible exceptions. The current of our lives and thoughts in short runs opposite to the stream of mere event.

How then, given the disposition to an ideal series $a-b-c-d-e$, and given our actual presence at d , can we arrive at the past? The result is gained in this way. Our present has a character associated with a , the beginning of the series, and so, by means of a , we identify ourselves with and pass through the series $a-b-c-d-e$. But this so far is not enough. This series so far, it will be rightly said, can at best give us a future, and it will not supply us with a past which lies behind us. Our explanation, however, so far was incomplete, and our fuller reply is as follows: (a) In order to perceive the past we must not merely identify ourselves with the beginning of a series, but that beginning must, also and as well, be incompatible with our present. That beginning must, beside its identity with our present state, have also a further character which prevents identification. If our present is Xd , then, since x is associated with a , we through x ideally reconstitute Xa , but the two, Xd and Xa , are or may be incompatible. (b) And secondly, starting from this incompatible beginning Xa , the series leads up to our actual present Xd , and can be prolonged into the future. And this in principle is the explanation required for our recovery and perception of the past.

I will illustrate this first by a simple example which in part is defective. I have seen a stone thrown and now perceive it at my feet. It is the ideal identity of the stone which reinstates its existence at the point of departure, an existence incompatible with the present. And then that incompatible sameness produces itself in series ideally till it is one with the actual present perception. The illustration is, however, imperfect because it presupposes and makes use of a fixed spatial order, and, whatever may be true of our actual development, I cannot think that in principle such a spatial series is involved. Let us then take another illustration. Let us suppose that in the same locality I am first wet and cold and then dry and warm. Now my personal presence

in this place can by association restore in idea my wet and cold presence in the same place, the two being both the same and yet also incompatible—and then an intermediate series, say of lighting the fire, or of the sun's coming out, may unite by an ideal prolongation the first with the second. It is by a leap through ideal identity that we make ourselves one with what is incompatible with our present, and this difference being then connected by a series with our present, we have our past, which is thus given both as sundered and as connected. Such at least is the main principle involved though I cannot attempt to work it out in its complex detail. The most instructive illustration is probably furnished by the fact of double memory. That past from time to time is remembered or forgotten which has or has not the special quality which from time to time distinguishes the present. In this way at least the facts can in principle be explained, and in some cases the actual quality appears to have been discovered.¹

The above may be made clearer, perhaps, by a reply to a possible objection. You cannot in every case, it may be said, show that what we remember is thus reproduced from the present, and memory therefore, it may be urged, is immediate and inexplicable—except of course, like everything else, by physiology. Now I should myself admit that the reason why I remember this thing and not that often cannot be found in my present psychical state. One might indeed urge that the reason is in all cases there and has been simply overlooked, but I am not myself prepared to endorse this contention. For our present purpose I would rather take no account of unconscious states of mind, and the contention seems not warranted by the facts which we are able actually to observe. Certainly to argue, on the other hand, that dispositions work without any kind of support from my present psychical state would be quite mistaken. The support is there always, though not always, I admit, the special support to this one disposition against another. And the cause of this special activity, I am quite ready to add, is in some cases to be taken as initiated merely cerebrally. But then I object that simply so far and with no more than this we have no memory at all. We have no memory until that which is reproduced is ideally

¹ By Janet. See his *Automatisme*. The principle was long ago laid down by Lotze. I would remark in this connexion that any one who fails to see that the present character of my feeling is a basis of reproduction, and who argues as if that basis must either be something before the mind, or else not psychical at all, does not in my opinion really understand the doctrine of Association.

separated from and is ideally connected with my present, and this ideal separation and connexion is and must be performed always in the way which I have described.¹ In short, memory as immediate is to my mind a sheer miracle, and I cannot accept a miracle even where I am assured that it is due merely to the brain.

The past, we have so far seen, is perceived by means of serial association, and, before I proceed, it is necessary to warn the reader here against a dangerous misconception. We have in the series $a-b-c$ the association of b with a and of c with b ; but we have not merely these separate associations, and, if we had no more than this, we should have no series at all. For every series which we know is known by us as one, and, if it had no real unity, the appearance of its oneness would be inexplicable. But this unity involves, so far as I can see, and consists in an ideal identity of character. There is some one content that is present through and is developed by the series, and is qualified by and itself essentially qualifies this series. But, if so, the members of the series will be joined not merely by association with one another, for each one must be associated also with one and the same quality. There will hence in fact be no merely successive association any more than there is any merely successive perception. The division of association into that which is simultaneous and that which is merely successive is in principle vicious, and any enquiry based on it is foredoomed to failure. The succession should be represented not as $X-a-b$

but rather as $\begin{array}{c} X \\ \diagup \quad \diagdown \\ a \quad b \end{array}$. And so we perceive how the whole

series may thus be thought of as one, and how the idea of the whole is united with and so may reproduce any of the members, singly or at irregular intervals, and again in either direction. For beside the mere association of member with member we have as its complement in every series the con-

¹ If we wish to avoid mistake here, we must beware of confusion. We must distinguish the exciting cause of a reproduction from the ground of a memory. The ground of a particular memory is that which places it in connexion with a certain member of my past series. But it may be partially excited by that which cannot complete and so date it. A scent may, for instance, remind me of a certain flower, which then by association calls up its adjuncts involving a dated event in my life. The dating associations here are not those which excite, and the latter may be very frail and slight indeed. The reproduced when excited *then* dates itself by association with what is constructed from my present. If on the contrary I go backwards or forwards retracing my life, the exciting cause of a memory and its ground may be the same.

nexion of each member with the idea of the whole.¹ And with this brief warning on a matter of the greatest importance I must pass on to pursue further the subject of this article.

We are aware of and think of the past as past always by an ideal construction from the present, and the immediate presentation of the past as such would be a gratuitous miracle. But the past comes to us not by memory alone but also in mere fancy and again by pure inference, and it is clear that we are here concerned with serious differences. I may for instance remember that yesterday I sent a letter to the post, or I may imagine how I might have done this, though in fact I know that I did not, or again, while I cannot remember my act, I can perhaps prove that it happened. I will now briefly discuss the nature of these differences, beginning with mere fancy in its contrast with thought, and taking thought here in the sense of proof or inference.

How does mere imagination differ from inference? The question, difficult in itself, has been obscured by a fundamental error, a superstition about the abstract nature of thought proper. Deferring the consideration of this, I will state briefly the true ground of distinction. In inference there is, or at least there is supposed to be, a continuous necessity, and there is necessity because in a word there is identity. The self-same subject develops itself ideally in the process, and is qualified in the conclusion. And it qualifies itself throughout by itself, without the intrusion at any point of an extraneous connexion. We say that *b* is *c* and *c* is *d* and *d* is *e*, and each of these is not because of anything outside, but simply. Hence *Ab* must be *Ae* because in the end it is so. And whatever difficulties may be raised as to the possibility of using in our actual practice this type, this type at

¹ This consideration, I need hardly add, should never be lost sight of, as at times it has been, in investigating the subject of "successive," "regressive," and again "indirect" association. Another aspect of the same problem is the existence of general forms or schemata of series. It seems clear from abstract considerations as well as from particular facts that these must exist and be used in the retaining of concrete series. Our awareness of gaps and our transition over them, and our power of representing series in an abbreviated form point in this direction. But these schemata, being themselves presumably psychical and associative, tend to confirm the doctrine of our text. There are some results bearing on this point in the investigations of Schömann and Müller. The subject is both very obscure and very difficult, and it deserves more attention than it appears to have received, a remark which applies emphatically to the perception of a series in general.

least represents what we aim at and seek to find in inference. It may help us to perceive this if we suppose that the type is modified. Let us assume no longer that b is c simply, but admit that b is c only by the help of x . The premise must now be written $b(x)$ is c , and the old conclusion will not stand. We cannot any longer assert that Ab must be Ae . It only may be so, and, so far as it is so, it is so because of x . The Ab that is e is now not the Ab with which we started. We can no longer assert that the subject has been qualified throughout further without becoming something else. The subject of the conclusion is Ab together with a foreign condition x , and the conclusion is therefore conditioned, and, if you assert it of mere Ab , it is conditional or faulty.

It is a defect of this kind which vitiates the result of mere imagination. That result we should agree has no necessity. In my mind's wandering the subject Ab may have actually now become $A\text{-}e$, but we cannot add that the thing is so really and of itself, for Ab , also and just as actually, may become something incompatible and may appear as $Ab\text{-not-}e$. In mere imagination, because the thing may be otherwise, it is not *really* what it is. Necessity is not present, and necessity is absent because there is a breach of identity. The subject Ab becomes Ae , but you cannot add "of itself". Something extraneous has at some point entered in and has vitiated the process, and you have passed from b to c not because b is c , but only because the passage has happened. An element has intervened not belonging directly to the pure essence of b , but attached to b merely as b is now present in psychical fact; and it is this unknown addition, this x , which by a chance association has carried Ab to e . Such is the defect in identity which distinguishes mere imagination from inference,¹ and where this defect is remedied imagination becomes at once the strictest thinking.

It may be instructive to notice here the superstition to which I referred. The distinction of mere imagination from thought consists in the absence or presence of logical control, and that control lies, as we have seen, in the preservation of ideal identity. But where this principle has not been grasped most incredible doctrines have found favour. Thought is abstract, we may be assured, while imagination is concrete.²

¹ Compare my *Principles of Logic*, p. 410.

² See for example Prof. Sully, *Human Mind*, I., p. 384. He finds himself later in conflict with fact, and admits (p. 395, note) that the demarcation is "not to be taken absolutely". But the real question surely is whether the very principle of distinction is not false and contrary to fact,

Now I might ask if mere fancy may not be itself highly abstract, but, passing this by, I will go on to a plainer objection. To maintain all thought to be abstract is to be brought into collision with evident facts. For the lower animals surely can reason while they hardly are able to think abstractly, except in certain theories. And in our own lives the field covered by what is called intuitive understanding is certainly not all abstract or again on the other side devoid of judgment and inference. An obvious instance is the thinking and judging about spatial arrangements in an individual case. And the writer who will assert that such conclusions as He is the guilty man, or That is the right way, are either all abstract or are else not acts of thought, is to my mind past argument.¹ Inference of course is always abstract if that means that it implies analysis and selection, and involves always a principle of necessity which can, or could conceivably, be abstracted. But in any other sense judgment and inference need certainly not be abstract, but may be concrete to an indefinite extent. In short, to set up imagination and thought as two separate faculties, and to speak of one using the other or again being applied to its service, is from first to last erroneous and indefensible. Imagination, if of a certain kind, is not something employed by thought, but is itself thinking proper. If, on the other hand, by mere imagination we mean our mental flow so far as that is subjected to no control whatever, and is so not "used" at all, this certainly is not imagination in the higher sense of the word. Mere imagination, where regulated logically, itself is inference. And again, so far as serving other ends and subjected to other kinds of control, it becomes and itself is contrivance, fancy and crea-

and, if so, how we can be justified in using it. If Prof. Sully's view is that between thought and mere imagination there is in principle really no difference at all, that the distinction drawn between them is merely an affair of language and convenience, and depends, perhaps usually though certainly not always, on degree of concreteness, that is a doctrine which, however unsatisfactory, would be intelligible. But such a doctrine hardly entitles any one who holds it to speak of these processes as if they really were two, to lay down a ground and principle of distinction, and to go on to speak of "a connexion between the two" (p. 381). Such a position seems quite inconsistent and indefensible, though I fear it is not uncommon.

¹ I am tempted to say this again of any one who can maintain that thought must depend upon language. There arises here, of course, the further question, how far thinking, which is not throughout dependent on language, and which is in this sense intuitional, can be genuinely abstract. This is an interesting and important question, but we are not concerned with it here.

tion in various forms, intellectual, practical and æsthetic. It is the special nature of the end and the special nature of the control which makes the difference in principle, and in the case of inference we have seen in what that difference consists.¹

From this our enquiry may return to the subject of memory. The mere imagination of the past, we have seen, is, like inference, an ideal construction from the present, and yet it fails to be inference. Memory is also an ideal construction from the present, and thus we are led to ask in what way memory differs from inference and from fancy; for that there is some difference seems plain. I may, to repeat our instance, infer that on last Monday I must have posted a letter, or I may remember the fact, or again I may merely imagine it, and these three attitudes are not the same. Now, as against fancy, it is clear that memory has necessity. It does not qualify its subject by a predicate the opposite of which can also be remembered, and which for this reason does not qualify the subject itself. Memory, in other words, is a judgment and an assertion about its subject. Hence it is often again said to involve belief, a point which I shall consider lower down. Thus memory being a judgment is so far the same as inference, and we must go on to ask if they are the same altogether.

If inference is understood in the sense in which we have taken it above, inference and memory certainly differ. For in memory there is a sequence and a continuity which is necessary, but on the other hand the necessity is not wholly intrinsic, or, if wholly intrinsic, is not so visibly. We do not, as in inference, go from *Ab* to *Abc*, because *b* is *c*. The sequence in memory cannot be so stated. The premises are not *Ab*, *bc*, but must be written as *Ab*, *Bc*. Now certainly *b* is contained in and is an element in *B*, but, with only so much, the sequence fails to be logical. For you cannot logically proceed from *Ab*, *Bc*, to *A-c*, unless you assume that *Bc* is equivalent, say, to *b-B-c*, and not merely to *b(x)-c*. The essential question is as to how the difference, which turns

¹ I do not know whether Wundt (*Grundzüge*, II., p. 490) really means to say that *all* imagination involves a plan and an idea which it develops. Such a statement seems to be in collision with the obvious fact of mental wandering. The nature of the different kinds of control over mere wandering is, so far as I see, the only ground from which this whole question could be satisfactorily treated. I certainly could not myself attempt that treatment, and I do not myself know where to send the reader for satisfaction. Wundt's exposition seems not only confused in detail but based on no clear principle whatever. Such principles of division as "passive" and "active" are, for instance, much worse than merely useless.

b into B and which so brings in *c*, is related to *b*, whether, in short, and how far this difference is really accidental. Let us take once more the example which we used above. When I remember that on Tuesday last I sent my letter, the sending does not follow of itself from the mere idea of myself on last Tuesday. Thus I cannot prove that I sent the letter, and I can even imagine that in fact I did not send it. The connexion, therefore, between the day and the act is not visibly logical, and it may be urged further that the connexion is not logical at all. The predicate, it may be said, does not in memory truly and really belong to the subject of the process. The predicate, on the contrary, is added brutally from without, and is attached by something quite external, and in memory, therefore, as was the case with mere chance imagination, ideal continuity is broken.

Now a breach of visible continuity I have agreed must be admitted, and memory therefore will fall short of inference. There is no proper inference where you predicate the conclusion of the subject because the subject is conditioned by something not intrinsically developed from its own nature. But in memory on the other hand the constraint is not wholly external. For the necessity is taken to lie within the content of the ideal process which develops the subject. From the idea of myself on Tuesday I pass to the sending of my letter because of something which belongs to the nature of things which is taken as present at that date. The compulsion in other words is assumed to come, not from mere matter of fact, but from the special character of a certain concrete fact.¹ We wrote the premises of inference as *Ab*, *bc*, and of mere imagination as *Ab*, *Bc*, where B was equivalent to *b(x)*, and where about the *x* we could say nothing whatever. But in memory that addition to and condition of *b*, which constitutes B, is taken not to be a mere *x*. The bond of union on the contrary is supposed to fall within the area of a specified content. The result is therefore logical so far and not merely psychical. It is logical in so far as the *x* has been partly determined, and so far as the condition of the result has thus been brought within the process, and no longer, as in mere imagination, falls outside in the unknown. On the other hand, because the *x* cannot further be specified, the result, though taken as necessary, still falls short of a logical conclusion. For the condition

¹ I shall add at the end of this article some further remarks on the logical difference between memory and imagination, and on the ambiguity of the term "matter of fact". Mere imagination gives "matter of fact," in one sense, more than memory does.

which carries *Ab* to *c* may qualify *Ab* beyond its own nature, and the conclusion therefore may not be true if you predicate it of *Ab*. And so far as in the proper sense we remember, this ignorance and this inability is still implied.¹ In memory the predicate *somewhat* belongs to the subject by the necessity of the content. The necessity is therefore intrinsic so far, since it falls within the process. On the other hand, because it is not known to belong intrinsically to the subject itself, we have no inference proper.

But though memory is not inference, in all memory an inference is involved. To connect my letter with the idea of last Tuesday I must first of all possess myself of that idea. But this possession involves, as we saw, a process from the present to something different, a process made through and resting on a point of ideal identity; and a passage of this sort seems certainly to be an inference. From the present *Ac* I go to the past *C* because of the *c* within *C*, and to go otherwise is not possible. You may object that the initial difference here between *c* and *C* is really external to *c*, just as again the further connexions given by memory were admitted not to be internal. This objection goes deep and would raise questions which I cannot discuss in this paper, but for our present purpose it may be dismissed. It would, if admitted, show that we have a defective inference here, as perhaps almost everywhere, and it would not show that we use no inference at all. And the premise which is and must be employed is this connexion of *c* with its difference, not taken as subject to the condition of an individual case but as unconditioned and simple. The connexion is of course not really simple in an absolute sense, but it is simple in the sense of being taken as unconditioned by the present fact as such. And if you do not use it so, you clearly cannot transcend the present at all. In other words this connexion is not itself an affair of memory or of "matter of fact," since it underlies these as their condition. The connexion is direct, and the process where it is used, even if it is used unjustifiably, I must therefore call an inference.²

¹ Hence to draw an inference from a recollection as such is not possible. For the mere recollection implies that we have not got the premise which we desire to employ. To draw an inference from one individual fact as such to another fact is as impossible in fact as it would be senseless in principle. So far as you remember, we may say, so far you are debarred from reasoning. But on this subject I am confident that better ideas are beginning to prevail both in psychology and in logic.

² We see here that inference both logically and in time precedes memory. I am convinced that, while in fact many or most of the lower animals certainly reason, perhaps none of them is able to remember in the proper sense of memory.

In the proper sense of inference then memory involves an inference but itself really is not one.¹ If, however, the term were used in a looser way, the answer might be different, and the whole sequence might perhaps be called an inference. It would be here as in a case which involves observation. I may see a man and recognise him as a certain person by a genuine inference, and I then may perceive him to act in a certain manner. I may, on this, attribute the perceived act to the inferred person, and this whole process might be termed an inference. And in the same way memory also might be called an inference, for the reason beside that it does not involve perception. I do not think, however, that we need here consider this looser use. Nor will I stop here to discuss a possible attempt to confound inference with memory on the ground that all inference in the end is irrational habit. For the secondary distinction between inference and memory proper would still remain, even if both were in the end mere results of memory in the sense of habit. I could not in this paper attempt to deal with such a fundamental question,² and must pass on to another branch of our enquiry.

¹The above and what follows may, I hope, justify the doctrine I have stated elsewhere, that memory in its essence involves an inference and so is inferential. I have never said or meant that memory consists in mere inference, and that you could make the goodness of the inference a test of memory. The question as to how memory, involving an inference, differs from inference proper, was not discussed or raised by me at all. The statement in my *Logic*, p. 75, as to the want of a point of identity in mere imagination, is certainly, as it stands, obscure and perhaps misleading. Whether my mind was clear when I wrote it I cannot now tell. What I should have said is that wherever we take ourselves merely to imagine, there not only is no intrinsical necessity attaching the result to the starting-place, but we also recognise that the identity of the subject is lost and that there is a breach in continuity. In memory, on the other hand, though the result is not taken as the necessary ideal development of the subject itself, yet we ignore the doubt as to a solution of continuity. We connect the end of the process with and attribute it to the beginning, because the process comes to us from one end to the other without an apparent break or loss of the subject and without the suggestion of an alien intrusion, or again of a sufficient competing alternative. In imagination the connexion between subject and predicate is that of casual occupancy, but in memory we have possession which to such an extent is *de facto* that the question of title is not raised, or, if raised, it is assumed to be somehow satisfactorily settled. With regard to the distinction between inference and mere imagination that is given correctly in my *Logic*, p. 410.

²A sceptical objection of this kind, if based on a psychological ground, seems (*Appearance*, p. 137) inconsistent with itself. The proper way to urge the objection is to compare the actual inferences which we must use with that ideal of inference which alone we can take as satisfactory.

A memory, we have seen, is a state of mind which differs from a mere imagination of the past, and in passing from one to the other we are aware that we take a new attitude. But how in the end can we tell that in memory our attitude is justified, and that our remembrance really is any better than mere fancy? So far, indeed, as we can apply inference and can rationally construct the past order, we seem to stand on safe ground. But when we are left at last with an idea of the past which shows no visible inconsistency, but about which we are able to find no further evidence, what test can we apply? The answer must be that we do not possess any valid criterion. There are marks which give us a certain degree of probability, and there are characters which more or less strongly impel us to take the idea as real, but there is in the end no criterion which is not fallible. I will briefly mention the characters which usually distinguish what we call a memory from a mere imagination. The interest of the subject is in the main confined to psychology, we should find some difficulties there into which I shall not enter, and the order of my statement does not pretend to be systematic.

We may place first the characters of clearness and strength, and in the next place fulness of detail, a detail which is not visibly rational. Next may come the sense of familiarity, and after that fixity of connexion, and I will then go on to add a few remarks. (i.) I will not venture to ask here what clearness and strength are to mean, but, whatever they mean, a mere imagination may have as much or more of them than a memory, and so much as this seems plain. (ii.) The same may be said with regard to mere fulness of detail, for a simple imagination may be very full in comparison with a memory. The character of the detail is, however, a sign to be noticed. If the particulars are many and yet appear as an accidental conjunction, not depending upon any general idea but all seemingly irrelevant, that, so far as it goes, is a mark of genuine memory. But this mark of irrational detail is, however, no test. (iii.) The sense of familiarity is again deceptive. Its nature has been much discussed,¹ but I think we may represent it as follows. There is in memory an absence of strangeness. The detail comes without shock to a mind which does not expect it and yet is already adjusted to receive it. And this adjustment points to an associative disposition set up by past experience, but it

¹The word "assimilation" tends to introduce us here, in the pages of Wundt and others, into a world of what I will venture to call the merest mythology.

points ambiguously. For your present accidental mood may favour and support strongly some idea about the past, and this idea may in consequence strike you as natural and true. And again a mere imagination, if you repeat it, becomes in this way familiar, and itself thus creates the inner association which then offers itself as a witness to independent fact. And there is, once more here, no sure way of distinction between the false and the true. (iv.) Fixity of connexion is again not a trustworthy test. Where an idea is connected with a certain date strongly and fixedly in such a way that the opposite is maintained with difficulty, and where in addition this connexion is constantly recurrent, we tend to take it as memory. And where, besides this, the detail appears as a mere conjunction of coinciding particulars, we feel ourselves confirmed. But mere imagination is unfortunately well known to present all these features, and it is impossible to find an infallible criterion or remedy. There are certain characters which usually are the result of that past fact to which the present idea refers. Foremost among these is that fixity and necessity of non-rational but integral detail which belongs to and points to an individual experience; and, when to this is added the sense of familiarity, then memory seldom fails to appear and is commonly justified. But the above characters can each, and all together, be present in a false imagination.

The veracity of memory is not absolute, and memory itself is subject to the control of a higher criterion. Our justification for regarding memory as in general accurate is briefly this, that by taking such a course we are best able to order and harmonise our world. There is in the end no other actual or possible criterion of fact and truth, and the search for a final fact and for an absolute datum is everywhere the pursuit of a mere *ignis fatuus*. You may look for it in outward perception, or you may seek it in inward experience and intuition, but in each case you are misled by one and the same error in a different dress. This is a subject too large to be dealt with here as a whole, but I will notice before proceeding a recent instructive attempt to prove that memory is not fallible.

The position taken by Prof. Ladd on this point seems far from clear.¹ I understand that for him it is a vital matter to show that memory is at least in part infallible, but for the rest his procedure seems obscure and even inconsistent

¹ *Philosophy of Mind*, p. 133, foll. I have at present no acquaintance with Prof. Ladd's other works.

with itself. He admits the extreme fallibility of memory in detail, but contends that at least it cannot be wrong in its assertion of my past existence. But how far, and in what sense, when bared of or transformed in detail, my past existence remains mine, is a matter not discussed, nor, apart from this, is there any evidence produced for the truth of the contention. If wherever else a witness can be tested he is shown to be fallible, you can hardly assume him to be infallible in or beyond a certain point, simply because in or beyond that point you have in fact always found him to be right. And with regard to memory of my past existence the case stands as follows. All the memories that we can examine belong to minds which have had some previous existence, and it is very probable that memory can exist only as the result of some foregoing psychical development, however short. And, if this is so, then memory will be for this extraneous reason, and will be so far, infallible. It will be infallible, we may say, accidentally and in fact, but not in principle. Its evidence will depend on and be restricted to that which is otherwise known. And such an infallibility is, I presume, for Prof. Ladd's purpose useless. And even so much as this can, perhaps, not be demonstrated. For that memory should supervene suddenly at a certain point of physiological development in such a way that its report of a past psychical self would be wholly mistaken, seems not clearly and in principle to be impossible. If so, even the limited infallibility of memory seems not proved, but in any case, even if proved, I have shown its dependent nature.¹

From this obscure and unsafe position Prof. Ladd passes to a second, which, itself untenable, seems not even consistent with the first. All reasoning, he argues, goes from premises to a conclusion, and our knowledge of the conclusion depends upon our memory of the premises. Hence, if that is fallible, every possible act of reasoning is discredited. Far then from being able to show that memory is fallible, we have even to assume the opposite if we intend to have any conclusion whatever. And with this we have a sure and certain remedy, Prof. Ladd argues, against the disease of scepticism. But the ground of the argument seems to me incorrect, and the

¹ If a man mistakenly remembers events ten years before he was born, is it satisfactory to add: There you see at once that his memory is really infallible, for he had, as a fact, some actual past (as you saw) before he made that mistake about his past? And even this amount of *de facto* infallibility rests on the assumption I have noticed in the text. It is therefore so far precarious, as well as in any case derivative.

conclusion drawn quite mistaken. The argument should prove, it seems to me, that memory is not fallible at all. Hence, when a particular memory is shown by reasoning to be false, we are left, it would appear, in hopeless confusion. For we must either accept both contradictories at once, or, if we select, we select on no principle, and surely this must be admitted to amount to scepticism. What we are to do when memory is thus divided against itself, and how mere memory is to sit in judgment on itself, are matters not explained. In short, that argument for the supremacy of reason which holds good against scepticism, becomes, if you transfer it to memory, wholly and entirely sceptical.¹

↓ Prof. Ladd's conclusion then is really sceptical, but the foundation of his argument, to return to that, consists in a mistake. It is not the case that reasoning depends on memory, and such an idea implies a wrong view about inference. In the first place in inference there need be no premises drawn out and put before the mind, and a very large tract of our reasoning must in this sense be called intuitive. Prof. Ladd has seen this, but without more ado he drives the evidence bodily out of court. Everything of this kind is "a merely mechanical movement of the ideas," a conclusion which I venture to regard as quite monstrous and a sufficient disproof of its foundation. That foundation is, however, in itself untenable. To assume that in an inference, where I go from premises to a conclusion, I depend upon memory, is to maintain that in inference I am necessitated *en route* not to know what I am about, and arrived at the end must have forgotten, and so be forced to remember, the start-

¹ How is mere memory to be a ruler and judge of itself? I cannot see how this is to be possible. If, on the other hand, memory is to subject itself to the judgment of reason, I cannot see how anywhere it is to claim independent authority, and to be treated as infallible or as more than *de facto* not mistaken. These are points on which I seek enlightenment so far in vain. If, for instance, it is urged that, in order to make the world intelligible, I must postulate that memory is right, unless so far as I have some special reason to think it anywhere wrong, I entirely agree. Certainly, I reply, and without doubt, we must make this assumption. But if, on this, I am told that, if so, we have an independent and ultimate postulate, I am forced to demur. Most evidently not so, I answer, if the assumption is made in order to make the world intelligible. If you leave out that, then, I agree, the postulate becomes ultimate, but it becomes at the same time arbitrary and, so far as I see, quite indefensible. If we are to think at all, we must postulate that reason is in principle infallible, and is the ultimate judge of its own errors. But to postulate that memory is in principle infallible seems to me to be, on the one hand, wholly unnecessary and, for any legitimate purpose, quite useless; and, on the other hand, it appears to me to be in the end really quite devoid of meaning.

ing-point and the way—and this surely is erroneous. The normal type of inference is surely the unbroken development of an identical subject, which does not leave the mind by the way and which, therefore, cannot possibly be remembered. This is the normal type, and I will add that, so far as this fails to be present, the operation is really not an inference.¹ With this I must pass from the subject of memory's fallibility.

I will add some words on the question which has been raised about Belief. Memory, we saw, takes its ideas of the past as real, while in mere imagination there is no such claim. It is the addition of belief, then, we hear it said, which turns imagination into memory, and our main task is to find in what this addition consists, or at least to set it down as "a final inexplicability". But the whole question is in this way misunderstood and the issue radically perverted. To take for granted the existence of "mere ideas" as self-evident and as a matter of course, and to treat belief in these as something supervening, or even adventitious, which we have then got to explain, is fundamentally erroneous. It is to make an assumption quite false in its principle and in its consequences most misleading. The presence of and the possibility of these "mere ideas" is, on the contrary, the very thing which calls most for explanation. No such ideas, we may say with confidence, can possibly exist in an early mind. To entertain an idea in which you do not believe, a suspended idea held in separation from the presented reality, is a late and, when we reflect, is an enormous mental achievement. It implies a disruption of that immediate unity of theory and practice which is at first throughout prevalent and is also necessary.

¹ Even in an indirect argument where I divide A into Ab and Ac, and then by disproving Ac prove Ab, I do not in the operation depend upon memory. Certainly at the end of my disproof of Ac I may have forgotten Ab, but I then return to the beginning with the knowledge that A is not c, and now with that in my mind reach the conclusion Ab from A. The knowledge that A is not c does not here depend on memory. It might so depend if, e.g., I had merely found in my notes that I had one day proved Ac to be false, and if I used that bare result. But so far that result obviously does not pretend to be itself made in my inference at all. And with direct reasoning it seems clear that, so far as the subject has lapsed from the mind by the way, there is properly no inference. The operation, to become an inference, must in some form be repeated without that lapse. The retention of an identical content before the mind, and the assumption that where I have seen no difference by the way there is no difference, can neither of them be called memory except by an abuse of language. The points raised by Prof. Ladd are certainly well worth raising and discussing, but his treatment of them seems not satisfactory.

At an early stage of mind, every suggestion which does not conflict with the felt present is appropriated by that present and is necessarily believed in, so far as we are able as yet to speak of belief. The suggestion, on the other hand, which is not believed in, cannot possibly be retained theoretically, but, apart from appetite or fear, is banished forthwith. It is not my business here to attempt to show how mere ideas become possible, and again how far, and in what sense, the simple entertainment of them still involves judgment and their reference to a modified Reality. It is sufficient to have noticed in passing a common mistake and to have pointed out its nature. The main question, we may say, is not about the *plus* of belief, but about the *minus* of mere thinking. The main question in other words is, How is it possible *not* to believe. Then, when that point is clear, we may approach with confidence a different and subsequent problem, What is the difference between primitive belief and the belief or judgment which comes after doubt, and which really does supervene upon our "mere ideas"? And when we have seen that mere ideas consist in the disruption of a unity, we shall not find it hard to perceive the nature of that which supervenes. It is the restoration of those ideas to the unity from which they were separated, and to which they are now once more joined in a higher sense. It is in this restoration that we must seek and find the real nature of that addition which we observe in belief. But the question of the separation is fundamental, and, if it is ignored, the whole enquiry is wrecked.¹

I should like to append to this paper some remarks on a point to which I have adverted (p. 156), the question, that is, about what is to be called "Matter of fact". So large a

¹ In this matter Prof. Bain's doctrine of Primitive Credulity has been of great service to psychology. I must, however, in passing remark that I am forced largely to dissent from his view as to belief. I dissent further from the mere identification of judgment with belief, but I cannot enter here into the difference between them. I would further direct the reader's attention to the fact that I may disbelieve in that which I certainly remember. The memory is here a judgment necessary in and on its own ground, but that region has here been disconnected from the world which I call my real world. This attitude is, of course, my common attitude towards the "imaginary". The judgment will be here a kind of conditional judgment. The difference I have noted between either the theoretical or practical acceptance of an idea *after* it has been held as a mere idea and its acceptance *previously*, has great importance. There is a re-union of the element, which was held aloof, once more with the felt reality. And it is this re-union which gives that feeling of "consent" which has been found so inexplicable.

subject, it is obvious, cannot properly be discussed in passing, and what follows, though not new, is offered merely in the way of invitation to further enquiry.

"Matter of fact" seems a highly ambiguous phrase, and for our present purpose we may distinguish three different senses, or three aspects of one sense. (1) The word may stand for that which is merely felt or is simply experienced, something which therefore excludes, so far, anything like judgment, truth, or falsehood. In this meaning of the word, imagination, memory and observation all alike are above, or if you please are below, matter of fact, for their connexions are all more or less analytic and abstract. (2) On the other side, these connexions will be matter of fact in varying degrees in proportion as they are external and apparently devoid of any intrinsic reason. (3) And again, they may be matter of fact as belonging to and as dependent on a certain point in our "real" series. It is on these two later shades of meaning that I am about to make some very brief remarks.¹

The "merely imaginary" marks the farthest extreme of matter of fact in the second of our senses. It is not an affair of mere sense, since it qualifies a subject by an ideal predicate; but its bond of connexion, on the other side, is bare matter of fact. This connexion or conjunction on the one hand is actually there, but on the other hand it seems entirely irrational, since there is no more reason for it than for its diametrical opposite. The connexion therefore *is*, but it is true and real only by virtue of unknown conditions, and therefore in an unknown form. You pass from subject to predicate not on any ground which appears as intrinsic, not because of anything which seems comprised in your content, but on the strength of what falls outside. This unknown bond is for you no more than the nature of the universe at large, and you may call it matter of fact in general. In this sense of matter of fact memory and observation possess less of it than does mere imagination.

But if we pass from the second to the third sense of our term, and understand matter of fact not as general but as special and individual, the case is altered, and observation and memory must now be admitted to stand above mere imagination. For in them the predicate is not attached to the subject by a merely unknown cause, but is taken as connected with it by the nature of what appears at a certain

¹ A man is, I presume, called for good or evil a "matter of fact" person, according as he confines himself to the actual events of what we call "our real world," in opposition either to the "imaginary" or again to wide general principles of truth and conduct.

point of our real series. Their truth therefore belongs to, and is conditioned by, what is known at least in part. The connexion on the one side remains outward and an unintelligible conjunction, so far as its bond, though localised, is not made explicit. The condition cannot be specified and so brought within the subject, and the judgment to this extent remains irrational and mere matter of fact. But on the other side, so far as the connexion falls within, and is conditioned by, a limited area of content, so far as it belongs, in other words, to a special matter of fact, it has so far already ceased to be a mere conjunction, and has become intrinsic and rational.¹

It is impossible within these limits to attempt to show how the process once begun is carried farther. The growth of our knowledge consists, we may say, in the sustained endeavour to get rid of mere matter of fact, to make the bond of connexion explicit, and to bring the condition of the predicate within the content of the subject. A genuine and complete truth cannot be confined within one part of our real series, but, to be complete and genuine, must take in the rest. And observation, if repeated,² and in a higher degree artificial experiment, transcend the individual case and pass into general truth, truth not conditioned by the fact of any date. But whether in the end, and, if so, how far and in what sense, the externality of the predicate can wholly disappear, is a question which here cannot be discussed.

¹ A mere imagination, if you take it as an occurrence in my history, belongs to matter of fact in the above sense of limited and individual fact. But this is because you have taken it not logically but psychologically. If you confine yourself to its logical aspect and consider it with reference merely to what it asserts, it is of course so far not an event in my life and a thing which can be observed. It so far *is* not matter of fact, but *possesses* matter of fact in the sense of matter of fact in general.

² In this respect memory remains inferior. To speak broadly and apart from a certain qualification, we have in memory a mere result which cannot be developed, and we cannot, as in continued and repeated observation, enquire further into the conditions of the result. For in memory (in the main) we are not in direct contact with these special conditions.

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II.—SOCIAL AUTOMATISM AND THE IMITATION THEORY.¹

By B. BOSANQUET.

1. IN applying the psychological conception of Automatism to a human community, I have in mind such cases of secondary Automatism as dressing oneself, walking, reading and writing. It is an analogy drawn from habits of this type, that seems to throw light on a fundamental problem of political philosophy.

In the individual life-history, such habits as these, we are told, subserve the end of an economy of attention. The greater part of our life depends upon actions which we have "learnt" with pains and exclusive preoccupation; but which, when once learnt, we can carry on while giving the bulk of our attention to something more worthy of a mature consciousness. Growth and progress of the mind depend on this relation. If we had never done learning to read and write, we should never be able to spare the attention needed to master a science or to compose a treatise. What can be done by machinery, is progressively handed over to machinery, while attention busies itself with the organisation of fresh experience.

If the analogy is sound, which suggests itself between the individual and the community in this respect, the ideal of political nihilism is exploded. For our conception would indicate that social life is necessarily and increasingly constituted by adjustments which have become automatic, and are in a large measure withdrawn from public attention. The formation of such adjustments would then appear to be the condition of social progress. A definite habit of orderly action, which receives the *imprimatur* of the State, and is thus put beyond the range of discussion, effects an economy of attention. The public mind is no longer preoccupied with it; it becomes part of the rationalised sub-structure of conscious life, and subserves the social end, while, so far as it is concerned, setting free the social mind for new ideas.

¹ Read before the Aristotelian Society.

Now it might be urged that the character of automatism is even more natural and necessary in social activities than in those which we primarily regard as individual. For the condition of automatism is a considerable degree of routine. And while routine is useful to individual life, in so far as it takes a definite shape, with activities which repeat themselves, it is absolutely essential to co-operative existence. At every point, in the complicated work of a civilised society, we have to reckon infallibly upon the action of others without conscious arrangement or special agreement. Once people walking in the streets fought for the "crown of the causeway"; then they turned out of each other's way as chance might dictate; and then, as Dr. Johnson tells us, the habit grew up that the pedestrian kept to the right. This habit has not passed into law in England, but it easily might do so as foot-passengers over the bridge at Dresden find that it has done and as the rule of the road for vehicles has done. The same account may be given of all the daily conduct of a law-abiding citizen. It moves in certain routines, determined by habit and sanctioned by law; and it is this characteristic alone which enables the enormously complex life of a modern community to be carried on in such a way that, so far from absorbing, it progressively liberates the attention of its members from the maintenance of its necessary conditions.

It is noticeable that in these habits the work of the best minds may be embodied; so that while we economise our attention we are actually better guided than our own best attention could have guided us.

When we speak of the State using force or coercion upon individuals, by far the greater part of what we mean consists in the fact that each private mind is rooted in the common life by interlocking adjustments which have become automatic to all. By being thus rooted, its capacities and faculties are immeasurably extended; and this extension of the private mind, which is a consolidation of it with the social fabric, must inevitably in certain cases act upon it as force. We are necessarily under certain circumstances dragged along with the vast machine whose powers we use as our own. The intentional and deliberate coercion used by the State through law and punishment is only a recognition and regulation of this inevitable situation, on which as we have seen the possibility of progress depends.

And we are in agreement with the best theory of punishment if we regard it from a point of view in harmony with this analogy. It is not the furnishing of a new motive to

make us do or omit, by the weighing of pains against pleasures, what otherwise we should have violently objected to doing or omitting. It is not essentially directed against intentional rebellion, and would not be rendered superfluous if all men became well-meaning. It is much more analogous to the start of pain which recalls us to ourselves when an automatic activity has failed to be self-regulating. We stumble in walking and hurt our foot; we pull ourself together, give full attention for a moment, and see that we were off the path; we take care to get on to it again, and give more heed to our steps in the future. As long as an imperfect mind has to meet progressive requirements, and to maintain a complex activity in excess of its powers of attention, a system of such reminders will be essential to society.

It must be noted that in a society a great deal of individual consciousness may be devoted to activities which are in the social sense automatic. That is to say, when anything has been reduced to routine by the public will, and handed over to a special class to carry out, then, as a matter of principle, it is in most cases withdrawn from the active attention of the community as such and of the bulk of its members, although a certain class are continuously occupied with it. The functions of the police are a case in point. It is plain that a difference exists between functions to which on the whole the maximum attention of the community is due, and functions which demand no attention, so to speak, for their own sake, but only in as far as is necessary to maintain order and freedom.

2. With reference to the rank or quality of these automatic activities a suggestion may be made in connexion with the biological principle of "short cuts," bearing on the problem of character and circumstance.

It seems to be an accepted principle¹ that "animals may perform movements which seem to be voluntary, with a nervous apparatus which would be inadequate to their performance by the child or man". The apparatus which represents a higher stage of mind has so encroached upon the independence of that which represents a lower stage, that the latter, in man, can no longer carry out the work which in the dog, for example, it will be able to take upon itself. A man, we are informed, can never recover his sight after the lesion of a certain higher brain centre; in the dog a lower brain centre still retains the power of taking over

¹ See Baldwin, *Mental Development in the Child and the Race*, p. 20 ff.

the work of vision, and the dog, after the same operation, may recover his sight.¹

It is not, perhaps, altogether fanciful to trace a transformation of this kind in the world of volition. It is often maintained that the simple and sensuous conditions which, as stimuli to actions, determine the life of primitive societies, and differentiate the hunter from the shepherd, and the shepherd from the tiller of the soil, continue to be the essential determinants of action—the true causal factors of the moral world—throughout the life of higher societies. But development follows a subtler course than this, and the unity of mind is more thorough than such a doctrine admits. The simplest life-maintaining activities of civilised man are conditioned by far-reaching ideas, and if the capacity for these ideas perishes, the simpler stimuli which might have sufficed in an earlier phase are unable to carry out the task of providing for existence. The maintenance of material conditions has been transferred to the higher moral powers—the co-operative qualities demanded by a complex society. But by this transference the simple impulses of love and hunger have become unable to govern the world, as once, perhaps, they did. An objection may be made to the precise nerve of the analogy, on the ground that it is one thing to say that a simple impulse is inadequate to a more complex problem, and another to say that the simple impulse has lost even the power which it previously possessed. But the two cases are not really separable. The transference has taken place because the work to be done came to be beyond the reach of the lower capacity ; and the disabling reaction upon the lower capacity itself is a matter of degree, and is always in such cases more or less evident. It would be easy to show that the motor effectiveness of the simpler impulses has been greatly impaired by the transference of their function to completer forms of volition. The phenomena of stationary populations are a case in point.

3. I may now say something of the antithesis of Imitation and Invention, which, under the form of Habit and Accommodation is alleged to permeate man's social being.

It is clear that in analysing the mind or minds of men in society, with reference to their social character, we have to deal at once with phenomena of identity and with phenomena of difference. The minds which form the mind of a given community have certain features in common as unquestionably as they have certain features which are individual. And

¹ See Baldwin, *Mental Development in the Child and the Race*, p. 20 ff.

it is an elementary fact of psychology that ideas, habits and actions tend to propagate themselves by suggestion through a number of minds which have the opportunity of acting upon each other. We are not therefore surprised to be told that imitation—the tendency to reproduction of suggestion—is a notable fact in the working of social intelligence. There is an aspect in which one individual may be regarded as a similar repetition of another, and the propagation of fashions or impulses throughout a multitude may be regarded as the imitation of one by others, and the repetition by others of the suggestion presented by one.

Nevertheless, upon a scrutiny of the true operative nature of social unity, we find that repetition and similarity are but superficial characteristics of it. What hold society together, we find, are its correlative differences; the relation which expresses itself on a large scale in the division of labour, or in Aristotle's axiom "No State can be composed of similars". And we look to our social psychologists for a recognition of the element of adapted difference apart from which co-operation and co-existence are impossibilities. But here, it would almost seem, a technical difficulty bars the way.

Imitation, or the propagation of similarities among similars, holds the field as an account of the common features of a society. But no differentiation can be got out of the tendency to reproduce a copy *per se*; and we seem none the less brought to a deadlock that we are supplied with the word "invention," to indicate the desired well-spring of novelty and individuality. Somehow, we are given to understand, the individual invents, and then, as we can easily imagine, his invention is generalised by the universal tendency to "take suggestion as a cat laps milk".

But here we seem to have an awkward dualism. Imitation and similarity divide the province of mind unequally with invention and difference; and instead of operating throughout with the same indivisible nature, intelligence appears to have an inexplicable preference for creation in some cases and for propagation in others. And the results are unsatisfying. The theory of a social mind is reduced by M. Le Bon to the explanation of impulsive emotion in a mob—the mere propagation of similitudes, as if critical discussion and the collation of points of view were a thing unknown in the formation of the social will. Even for M. Durkheim the spheres of similitude and of difference are wholly disparate; and the force put upon facts in order to demonstrate that penal and industrial law (corresponding to similitude and difference respectively) occupy different regions of the

social territory is enough to show that some fundamental assumption is leading us astray.

If we turn to Prof. Baldwin's analysis, we find, as we might expect, a resolute repudiation of dualism. "We¹ cannot divide the child into two parts, two realities coming up to the facts of life with different capabilities, one fitted only to imitate, and the other fitted to invent. Of course it is the same child whatever he does; and if he be gifted with the power of invention at all, this power should show itself in all that he does—even in his imitations." He recognises that frequently in discussion "the two types of function are as far removed from each other as the letters *vs* put between them would suggest".

But we have seen protests of this kind before, and we know that they decide nothing. For, only too often, they herald no comprehensive principle of unity, but a resolution of one thing into terms of another, the other being a mere fragment of the whole in which both should be complementary aspects. Have we not, I ask with diffidence in presence of Prof. Baldwin's suggestive and laborious researches—have we not, in principle, got a case of this kind here? I have heard it said, perhaps too curtly, that Prof. Baldwin explains invention as the failure to imitate. He does not use the phrase; but does not the theory and description of the child's invention bear it out?² If the criticism is justified, his theory will remind us of the famous definition of mythology as a disease of language—the work of poetic imagination being regarded as a degeneration of the meanings of words. In some degree, indeed, as I understand him, "the valuable variations of thoughts are clearly more or less determined in their direction by reason of the particular system in which they occur".³ But yet, it would seem, in the main they have to be picked out by selection,⁴ and therefore are conceived as after all mere variations, generated in an attempted imitation, and presented for a choice of survivors to be made from them, not thought-products with an inherent rule and direction which govern the adapted difference with which they come into being. In as far as the pregnant passages just alluded to can be shown to contain the essentials of the view to which I am about to refer, I shall admit my criticism to have been unjustified.

Subject to this reservation, it appears to me that the whole tradition of the sociological psychology in question is vitiated by a fallacy which has its roots in the atomic doctrine of

¹ *Social and Ethical Interpretations in Mental Development*, p. 90.

² *Ib.*, pp. 105, 107.

³ *Ib. id.*, 96.

⁴ *Ib.*, 120.

Association. The importance attached to repetition of similar units, as an analysis of society, and as an analysis of habit, betrays this origin. If the unity of the social mind is primarily a repetition or multiplication of resemblances, and if the *modus operandi* of mind as such is primarily the reinstatement of a perception or idea similar to a copy which has been previously presented to the mind from without, we see the ground of the difficulty which has been felt in locating the origin of difference,¹ which is introduced under the names of accommodation or invention as against the typical processes of habit and imitation. As I read the story, Prof. Baldwin, having started like others with this impossible point of view, is working with immense ingenuity to remould it. In doing so, he strains the idea of imitation, in two degrees, beyond its normal meaning. Its normal meaning I take to be the reproduction by a sensitive or conscious subject of some trait presented to it from without, because of its being presented. The typical meaning which Prof. Baldwin assigns to it is however already an extension of this, including any reaction by which in consequence of a certain stimulus an organism secures to itself more of the same stimulus, as e.g., when an organism approaches a source of light or warmth. It is plain that here we are beyond the limits of the repetition of a trait or movement presented as a copy; and we are taken one more remove beyond this normal meaning of imitation, when it is suggested that we are essentially imitating in every act of will. "What are we really bringing about in willing anything? Are we not hoping that through us a kind of experience, object, thing, in the world, may be brought about after the pattern of our idea or purpose?"² Here the origin of our operative idea is wholly lost sight of, and the imitation lies in the passing of the idea into fact.

In all this, then, we have got far beyond the reproduction of a given copy in our operative ideas; and in being extended to cover volition—the passing of idea into fact—imitation has lost its differentia, and ceases to offer any account of the relation of action or ideas to previous actions or ideas of ourselves or of others. For the origin of difference, there-

¹ This suggestion is confirmed by the passage quoted from Prof. Royce; *Social and Ethical Interpretations*, p. 233, note. The tendency to find a special and separate explanation for phenomena of difference really seems to indicate something fundamentally imperfect in the writer's conception of unity and identity. I repeat a hackneyed illustration. The type of co-operative unity is not to be found in such a relation as that between two similar screws, but only in that between a screw and its nut.

² *Mental Development*, etc., p. 382.

fore, we must look not to this extended account of imitation, but to the passage in which imitation and invention are explained and reconciled. And there, as we said above, it is unquestionable that a strong effort is being made to weld the two together, but it seems no less unquestionable that the welding is artificial, and must be so, so long as we start from the point of view of similarity and imitation, which as such have no essential aspect of difference. The process of imitation is to reproduce a copy. In this reproduction we are told a variation may arise from accessory circumstances, which may be selected as valuable, and that is an invention. Can there be a doubt that we are here working with the machinery of Association by Similarity, and the old notion of a rack full of photograph slides stored in the mind, each of which is in the normal case reproduced without modification? Additional stimuli, it appears to be intended, may produce additional reactions, which form variations which have to be reconciled with the imitation-reaction, as parts of a system; but this is quite different from saying that the reaction to stimulus is *ipso facto* proportional to the place of the stimulus in a system. I can find in the whole theory absolutely no suggestion, unless there was some hint of it in the brief passage referred to above, that the mind can appropriate a law or principle the scheme of a whole, and naturally and necessarily differentiate its reactions in accordance with the bearing of such a principle on the new situation presented.

And yet to the student of social philosophy such a doctrine is an absolutely fundamental necessity. Nothing of serious importance happens by genuine imitation. There is no grain of truth in the restriction of invention to the individual, as opposed to generalisation which takes place by a plurality of individuals copying the one. All the business of society goes on by differentiated reactions. We never do simply what another person does. We do something different, which has a definite reference to it. I do not build my house. I give instructions and I pay for it; and of all the persons concerned, no one simply reproduces the action of another; but all do different things as determined by the scheme or law of action which is the universal working in their minds. The house is an invention, and a joint invention, a universal in which many minds have met. Pure imitation is an extreme sub-case of this principle, a sub-case in which differentiation is at a minimum. But strictly speaking, differentiation is always there. Even if I buy a straw hat because my neighbour has one, I buy one that fits me, and not one that fits him. Every man in society is what he is through a law or scheme which assigns him an individual position, differing

from all others, and identified with them precisely through these differences, by which alone he can co-operate with them. Similarities are superficial consequences of the relations which identity in difference prescribes.

The error, then, if I am right, springs from working with Similarity instead of Identity. Directly we introduce Identity, Difference falls into its place as an inherent aspect of the principle, and we understand that no reconciliation is needed, but the universal is unity manifested in difference from the beginning and throughout.

In the laws of habit, thought and action, Identity exhibits itself in the shape of Relative Suggestion ; the point of which is that the mind is reproductive not of a similarity, but according to a universal, the more or less systematic scheme of a whole. I need not enlarge on the conception in question, which is familiar to readers of Mr. Stout's *Analytic Psychology*. I will only insist on two points ; first, that it follows immediately from the substitution of Identity for Similarity in the theory of Association ; and, secondly, that it at once satisfies the absolute demand of social experience, for a doctrine that will show why we never do simply what others do, but always something different from what they do and definitely related to it. The whole idea of the social mind has, in my view, been narrowed and distorted by the failure to grasp the importance of this principle, and it has not been understood that all social co-operation necessarily involves a unity of intelligence and habit which is in its nature logical and inventive ; the invention not being confined within individual minds, but being simply an aspect of the differentiated reactions, by which a co-operative body taken as a whole endeavours to be equal to the situation at a given moment. Every action, without any exception, is in principle a difference within an identity. The use of language is a familiar example. Every application of a word has an element of originality, and when the slightest difficulty of expression occurs the aspect of invention becomes emphatic, and is attended with noticeable pleasure. I have taken this opportunity of explaining my position towards the Imitation theory, partly because in a forthcoming work, which afforded me no space for psychological discussion, I have been obliged to refer very briefly to the views of Prof. Baldwin and others.¹

¹ I regret that Prof. Baldwin's Presidential Address on " Selective Thinking," delivered in December, 1897, only came into my hands at the moment when the present paper was being sent to press. So far as I can judge, it confirms my view that Prof. Baldwin occupies a position intermediate between that of Associationism and that of Relative Suggestion, with a tendency towards the latter.

III.—THE NATURE OF JUDGMENT.¹

BY G. E. MOORE.

“TRUTH and falsehood,” says Mr. Bradley (*Logic*, p. 2), “depend on the relation of our ideas to reality.” And he immediately goes on to explain that, in this statement, “ideas” must not be understood to mean mere “states of my mind”. The ideas, he says, on the relation of which to reality truth depends, are “*mere* ideas, signs of an existence other than themselves,” and this aspect of them must not be confused either with their existence in my mind or with their particular character as so existent, which may be called their content. “For logic, at least,” he says, “all ideas are signs” (p. 5); and “A sign is any fact that has a meaning,” while “meaning consists of a part of the content (original or acquired) cut off, fixed by the mind, and considered apart from the existence of the sign” (p. 4).

But Mr. Bradley himself does not remain true to this conception of the logical idea as the idea of something. As such, indeed, it *is* only the psychological idea, related, indeed, to that which it signifies, but only related to it. Hence he finds it necessary, later, to use “idea,” not of the symbol, but of the symbolised. Ideas, as *meanings*, not as “facts, which have a meaning,” “are,” he says (p. 8), “the ideas we spoke of, when we said ‘Without ideas no judgment’”. And he proceeds to show that “in predication we do not *use* the mental fact, but only the meaning”; although, where he did say “Without ideas no judgment,” his words were “we cannot judge until we use ideas as ideas. We must have become aware that they are not realities, that they are *mere* ideas, signs of an existence other than themselves.” It would seem plain, then, that there his doctrine was that we do, in predication, use the mental fact, though only as a sign; whereas here his doctrine is that we do not use the mental fact, even as a sign, but only that which it signifies. This important transition he slurs over with the phrase: “But it is better to say the idea *is* the meaning”. The question is surely not of which is “better to say,” but which is true.

¹ Read before the Aristotelian Society.

Now to Mr. Bradley's argument that "the idea in judgment is the universal meaning" I have nothing to add. It appears to me conclusive, as against those, of whom there have been too many, who have treated the idea as a mental state. But he seems to me to be infected by the same error as theirs, alike in his preliminary failure to distinguish clearly whether it is the symbol or the symbolised of which he is speaking, and in his final description of the "idea, as meaning," when he has definitely decided in its favour. "A meaning," he says, as we saw above, "consists of a part of the content (original or acquired) cut off, fixed by the mind, and considered apart from the existence of the sign." And again, "an idea, if we use idea of the meaning, is neither given nor presented, but is taken" (p. 8). If indeed "the universal meaning" were thus simply a part of the content of our own ideas, as mental states, and that, too, a part "cut off" by our own minds, it would be intelligible that "truth and falsehood" should still be said to "depend on the relation of our ideas to reality". It will be our endeavour to show, on the contrary, that the "idea used in judgment" is not a part of the content of our ideas, nor produced by any action of our minds, and that hence truth and falsehood are not dependent on the relation of *our* ideas to reality.

I shall in future use the term "concept" for what Mr. Bradley calls a "universal meaning"; since the term "idea" is plainly full of ambiguities, whereas "concept" and its German equivalent "*Begriff*" have been more nearly appropriated to the use in question. There is, indeed, a great similarity between Kant's description of his "*Begriff*," and Mr. Bradley's of his "logical idea". For Kant, too, it is the "analytical unity of consciousness" which makes a "*Vorstellung*" or "idea" into a "*conceptus communis*" or "*gemeinsamer Begriff*" (R.V., p. 116 n.).

It is our object to protest against this description of a concept as an "abstraction" from ideas.

Mr. Bradley's doctrine, as above sketched, presupposes that, when I have an idea (*Vorstellung*) of something, that something is itself part of the content of my idea. This doctrine, for the present, I am ready to admit; my question now is whether, when I have an idea of something, that something must not *also* be regarded as something other than part of the content of my idea. The content of an idea is, Mr. Bradley tells us, what the idea is; it is "a character which is different or distinguishable from that of other" ideas, treated as mental facts. Now, before I can

judge at all on Mr. Bradley's theory, a part of this character must have been "cut off and fixed by the mind". But my question is, whether we can thus cut off a part of the character of our ideas, and attribute that part to something else, unless we already know, in part at least, what is the character of the idea from which we are to cut off the part in question. If not, then we have already made a judgment with regard to the character of our idea. But this judgment, again, requires, on Mr. Bradley's theory, that I should have had an idea of my idea, and should have already cut off a part of the content of that secondary idea, in order that I may make a judgment with regard to the character of the primary idea that is in question. And similarly it is quite impossible that I should know what the content of my secondary idea is, until I have made it in its turn the object of a third idea, by taking part of this tertiary content. And so on *ad infinitum*. The theory would therefore seem to demand the completion of an infinite number of psychological judgments before any judgment can be made at all. But such a completion is impossible; and therefore all judgment is likewise impossible. It follows, therefore, if we are to avoid this absurdity, that the 'idea used in judgment' must be something other than a part of the content of any idea of mine. Mr. Bradley's theory presupposes that I may have two ideas, that have a part of their content in common; but he would at the same time compel us to describe this common part of content as part of the content of some third idea. But what is gained by such a description? If the part of content of this third idea is a part only in the same sense, as the common part of the other two is a part of each, then I am offering an explanation which presupposes that which was to be explained. Whereas if the part, which is used in explanation, is a part in the only sense which will make my explanation significant, *i.e.*, an existent part, then it is difficult to see how that which belongs to one idea can also come to belong to other ideas and yet remain one and the same. In short, the idea used in judgment is indeed a 'universal meaning'; but it cannot, for that very reason, be described as part of the content of any psychological idea whatever.

These difficulties, which are of the same nature as the famous *τρίτος ἀνθρώπος* urged against the hypostasised Platonic ideas, inevitably proceed from trying to explain the concept in terms of some existent fact, whether mental or of any other nature. All such explanations do in fact presuppose the nature of the concept, as a *genus per se*, irre-

ducible to anything else. The concept is not a mental fact, nor any part of a mental fact. Identity of content is presupposed in any reasoning; and to explain the identity of content between two facts by supposing that content to be a part of the content of some third fact, must involve a vicious circle. For in order that the content of the third fact may perform this office, it must already be supposed like the contents of the other two, *i.e.*, having something in common with them, and this community of content is exactly what it was proposed to explain.

When, therefore, I say "This rose is red," I am not attributing part of the content of my idea to the rose, nor yet attributing parts of the content of my ideas of rose and red together to some third subject. What I am asserting is a specific connexion of certain concepts forming the total concept "rose" with the concepts "this" and "now" and "red"; and the judgment is true if such a connexion is existent. Similarly when I say "The chimera has three heads," the chimera is not an idea in my mind, nor any part of such idea. What I mean to assert is nothing about my mental states, but a specific connexion of concepts. If the judgment is false, that is not because my *ideas* do not correspond to reality, but because such a conjunction of concepts is not to be found among existents.

With this, then, we have approached the nature of a proposition or judgment. A proposition is composed not of words, nor yet of thoughts, but of concepts. Concepts are possible objects of thought; but that is no definition of them. It merely states that they may come into relation with a thinker; and in order that they *may* do anything, they must already *be* something. It is indifferent to their nature whether anybody thinks them or not. They are incapable of change; and the relation into which they enter with the knowing subject implies no action or reaction. It is a unique relation which can begin or cease with a change in the subject; but the concept is neither cause nor effect of such a change. The occurrence of the relation has, no doubt, its causes and effects, but these are to be found only in the subject.

It is of such entities as these that a proposition is composed. In it certain concepts stand in specific relations with one another. And our question now is, wherein a proposition differs from a concept, that it may be either true or false.

It is at first sight tempting to say that the truth of a proposition depends on its relation to reality; that any pro-

position is true which consists of a combination of concepts that is actually to be found among existents. This explanation was indeed actually used above (p. 179), as a preliminary explanation. And it may be admitted that propositions with which this is the case are true. But if this constituted the truth of a proposition, concepts too might in themselves be true. Red would be a true concept, because there actually are red things; and conversely a chimera would be a false concept, because no such combination either has been, is, or will be (so far as we know) among existent things. But the theory must be rejected as an ultimate one, because not all true propositions have this relation to reality. For example $2 + 2 = 4$ is true, whether there exist two things or not. Moreover it may be doubted here whether even the concepts of which the proposition consists, can ever be said to exist. We should have to stretch our notion of existence beyond intelligibility, to suppose that 2 ever has been, is, or will be an existent.

It would seem, in fact, from this example, that a proposition is nothing other than a complex concept. The difference between a concept and a proposition, in virtue of which the latter alone can be called true or false, would seem to lie merely in the simplicity of the former. A proposition is a synthesis of concepts; and, just as concepts are themselves immutably what they are, so they stand in infinite relations to one another equally immutable. A proposition is constituted by any number of concepts, together with a specific relation between them; and according to the nature of this relation the proposition may be either true or false. What kind of relation makes a proposition true, what false, cannot be further defined, but must be immediately recognised.

And this description will also apply to those cases where there appears to be a reference to existence. Existence is itself a concept; it is something which we mean; and the great body of propositions, in which existence is joined to other concepts or syntheses of concepts, are simply true or false according to the relation in which it stands to them. It is not denied that this is a peculiarly important concept; that we are peculiarly anxious to know what exists. It is only maintained that existence is logically subordinate to truth; that truth cannot be defined by a reference to existence, but existence only by a reference to truth. When I say "This paper exists," I must require that this proposition be true. If it is not true, it is unimportant, and I can have no interest in it. But if it is true, it means only that the concepts, which are combined in specific relations in the

concept of this paper, are also combined in a specific manner with the concept of existence. That specific manner is something immediately known, like red or two. It is highly important, because we set such value upon it; but it is itself a concept. All that exists is thus composed of concepts necessarily related to one another in specific manners, and likewise to the concept of existence.

I am fully aware how paradoxical this theory must appear, and even how contemptible. But it seems to me to follow from premisses generally admitted, and to have been avoided only by lack of logical consistency. I assume Mr. Bradley's proof that the concept is necessary to truth and falsehood. I endeavour to show, what I must own appears to me perfectly obvious, that the concept can consistently be described neither as an existent, nor as part of an existent, since it is presupposed in the conception of an existent. It is similarly impossible that truth should depend on a relation to existents or to an existent, since the proposition by which it is so defined must itself be true, and the truth of this can certainly not be established, without a vicious circle, by exhibiting its dependence on an existent. Truth, however, would certainly seem to involve at least two terms, and some relation between them; falsehood involves the same; and hence it would seem to remain, that we regard truth and falsehood as properties of certain concepts, together with their relations—a whole to which we give the name of proposition.

I have appealed throughout to the rules of logic; nor, if any one rejects these, should I have much to fear from his arguments. An appeal to the facts is useless. For, in order that a fact may be made the basis of an argument, it must first be put in the form of a proposition, and, moreover, this proposition must be supposed true; and then there must recur the dilemma, whether rules of logic are to be accepted or rejected. And these rules once accepted, would seem themselves to offer a confirmation of our theory. For all true inference must be inference from a true proposition; and that the conclusion follows from the premiss must again be a true proposition: so that here also it would appear that the nature of a true proposition is the ultimate *datum*. Nor is an appeal to the "matter" of the proposition more useful than the former appeal to the facts. It may be true that this matter is given in sensation, or in any other conceivable way. We are not concerned with its origin, but with its nature; and its nature, if it is to enter into a true proposition, must, we agree with Mr. Bradley, be the nature of a concept and no

other : and then the old conclusions follow. Nor, finally, is a vicious circle involved in our own attempt to establish conclusions with regard to truth, by rules of logic in which that conception is presupposed. For our conclusion is that truth is itself a simple concept ; that it is logically prior to any proposition. But a vicious circle occurs only where a proposition is taken as prior to a concept, or a more complex proposition (one involving more concepts) as prior to one which is more simple. Valid logical processes would seem to be of two kinds. It is possible to start from a complex proposition and to consider what propositions are involved in it. In this case the latter must always be more simple than the former ; and they may be true, although the former is false. Or it is possible to start from a more simple proposition and to deduce one that is more complex, by successive additions of concepts ; which is the properly deductive procedure exhibited in the propositions of Euclid : and in this case the premiss must be true, if the conclusion is so. It may be well to state that both procedures are synthetic, in the sense that the results arrived at are different from the premisses, and merely related to them. In a vicious circle, on the other hand, the two procedures are confused. A result arrived at by the former of the two processes just described, is regarded as involving the truth of its premiss. Thus, when we say that the conceptual nature of truth is involved in logical procedure, no vicious circle is committed, since we do not thereby presuppose the truth of logical procedure. But when an existent is said to be involved in truth, a vicious circle is committed, since the proposition "Something is true," in which "Something exists" is supposed to be involved, must itself be true, if the latter is to be so.

It seems necessary, then, to regard the world as formed of concepts. These are the only objects of knowledge. They cannot be regarded fundamentally as abstractions either from things or from ideas ; since both alike can, if anything is to be true of them, be composed of nothing but concepts. A thing becomes intelligible first when it is analysed into its constituent concepts. The material diversity of things, which is generally taken as starting-point, is only derived ; and the identity of the concept, in several different things, which appears on that assumption as the problem of philosophy, will now, if it instead be taken as the starting-point, render the derivation easy. Two things are then seen to be differentiated by the different relations in which their common concepts stand to other concepts. The opposition

of concepts to existents disappears, since an existent is seen to be nothing but a concept or complex of concepts standing in a unique relation to the concept of existence. Even the description of an existent as a proposition (a true existential proposition) seems to lose its strangeness, when it is remembered that a proposition is here to be understood, not as anything subjective—an assertion or affirmation of something—but as the combination of concepts which is affirmed. For we are familiar with the idea of affirming or “*positing*” an existent, of knowing objects as well as propositions; and the difficulty hitherto has been to discover wherein the two processes were akin. It now appears that perception is to be regarded philosophically as the cognition of an existential proposition; and it is thus apparent how it can furnish a basis for inference, which uniformly exhibits the connexion between propositions. Conversely light is thrown on the nature of inference. For, whereas it could not be maintained that the conclusion was only connected with the premisses in my thoughts, and that an inference was nothing, if nobody was making it, great difficulty was felt as to the kind of objectivity that belonged to the terms and their relation, since existence was taken as the type of objectivity. This difficulty is removed, when it is acknowledged that the relation of premisses to conclusion is an objective relation, in the same sense as the relation of existence to what exists is objective. It is no longer necessary to hold that logical connexions must, in some obscure sense, exist, since to exist is merely to stand in a certain logical connexion.

It will be apparent how much this theory has in common with Kant's theory of perception. It differs chiefly in substituting for sensations, as the data of knowledge, concepts; and in refusing to regard the relations in which they stand as, in some obscure sense, the work of the mind. It rejects the attempt to explain “the possibility of knowledge,” accepting the cognitive relation as an ultimate *datum* or pre-supposition; since it maintains the objections which Kant himself urged against an explanation by causality, and recognises no other kind of explanation than that by way of logical connexion with other concepts. It thus renounces the supposed unity of conception guaranteed by Idealism even in the Kantian form, and still more the boasted reduction of all differences to the harmony of “Absolute Spirit,” which marks the Hegelian development. But it is important to point out that it retains the doctrine of Transcendentalism. For Kant's Transcendentalism rests on the distinction between empirical and *a priori* propositions. This is a distinc-

tion which offers a striking correspondence to that between the categorical and hypothetical judgments; and since one object of this paper is to combat the view which inclines to take the categorical judgment as the typical form, and attempts in consequence to reduce the hypothetical judgment to it, it will not be out of place to discuss Kant's distinction at some length.

Kant himself offers us two marks by which an *a priori* judgment may be distinguished. 'A proposition,' he says, 'which is thought along with its necessity is an *a priori* judgment.' And it is absolutely *a priori* only if it be not deduced from any proposition, that is not itself a necessary proposition. The second mark of the *a priori* is strict universality. But unfortunately Kant himself seems to admit the invalidity of this as a mark; since he immediately proceeds to state that an empirical universality may hold in all cases ('for example, in the proposition : All bodies are heavy') and hence be strictly universal.¹

It is true Kant states that this empirical universality is merely arbitrary. We ought, he says, to express our proposition in the form : 'So far as we have yet observed, there is no exception from' the rule that all bodies are heavy. But it would seem that such a qualification can only affect the truth of our proposition and not its content. It may be questioned whether we have a right to assert universality, but it is universality which we assert. The limitations which Kant points out as belonging to the proposition, can properly be expressed only in the doubt whether we have found a rule at all, not in a doubt whether there are exceptions to it. It may not be true that all bodies are heavy; but whether true or not, it is a universal proposition. There is no difference between this proposition and such as are *a priori*, in respect of universality. And Kant could hardly wish to assert that the difference lay in its truth. For this proposition, he would admit, may be true; and, if so, then it would be *a priori*. But he would not admit the suggestion that it *may* be *a priori*: he asserts that it is not so. The difference between the empirical and the *a priori*, if there is a difference, must therefore be in some other mark than in this universality, which Kant nevertheless asserts to be 'by itself an infallible criterion' (*ib.*, p. 35). We may next consider whether such a mark is to be found in 'necessity'.

In this investigation, too, it may be well to examine his example 'All bodies are heavy,' since this proposition might

¹ *R.V.*, p. 85. 'Hartenstein, ed. 1867.'

seem to have a claim to necessity also, just as it is undoubtedly universal. Kant speaks of it as 'a rule borrowed from experience' (*ib.*, p. 34). By this language and by his use of 'Bodies are heavy' as convertible with it, he would seem to suggest that he would not base its empirical character solely on its extensional interpretation. If, as seems probable, he would allow 'Body is heavy' or 'Man is mortal,' to be equally empirical propositions, then it is plain that what he calls empirical may involve necessity. It is certain, at all events, that if we are to understand by empirical propositions only such as experience can justify, such a proposition as 'All bodies are heavy' cannot be regarded as empirical. It is based on the proposition 'Body is heavy,' with which, if it is to be used for purposes of inference, it must be regarded as convertible. I assume, therefore, that Kant would not have refused to regard 'Body is heavy' as an empirical proposition. It would seem certainly to come under his class of 'rules drawn from experience,' whereas 'All bodies are heavy,' regarded solely as extensional, cannot be called a rule. The use of this example would seem to lead to important results with regard to the true definition of empirical propositions.

But let us first return to 'All bodies are heavy'; since even this would seem to involve in its very meaning an assertion of necessity. If it be taken purely in extension, it must be resolved into 'This body, and that body, and that body, *ad infinitum*, are, have been and will be heavy'. It involves, therefore, the proposition 'This body is heavy'. But in any proposition of this simple categorical form the notion of substance and attribute is already involved.¹ Wherever a predicate is asserted of a subject, it is implied that the subject is a *thing*; that it is something marked by the possession of certain attributes and capable of possessing others. 'This body is heavy' presupposes, therefore, 'Body is a thing, and heaviness is a mere attribute'. For we could not convert the proposition into 'Heaviness is corporeal'. But that 'Body is a thing,' and that 'Heaviness is an attribute,' would seem to be necessary propositions. We may indeed be mistaken in supposing that they are true; but if we were ever to find that heaviness was not an attribute, we should be bound to conclude that it never had been and never would be, not that it was so once but had ceased so to be. All such judgments are truly 'thought along with their necessity'. They are as necessary as that $2+2=4$. The difference between

¹ Cf. *R.V.*, p. 36.

the two forms of proposition lies not in that the former lacks necessity, nor even that it implies the proposition 'Heaviness exists'; for even if heaviness did not exist, the proposition would be true. The proposition means that heaviness could not be other than an attribute; and hence, if Kant's words (p. 34) are to be taken strictly, it cannot be empirical. In this respect, therefore, it is quite on a level with ' $2+2=4$ '; which also would be true even if there were no two things. The difference seems to lie rather in the nature of the concepts of which the necessary relation is predicated. 'Heaviness' can exist; it is not meaningless to say 'Heaviness exists here and now'; whereas 'attribute,' 'two,' and other like conceptions can only claim a precarious sort of existence in so far as they are necessarily related to these other notions of which alone properly existential propositions can be made.

If, therefore, we wish to find propositions involving no necessity,¹ we must descend to purely existential propositions—propositions which do not involve the notions of substance and attribute. These alone can be truly taught us by experience, if experience 'cannot teach us that a thing could not be otherwise' (p. 34). And even these are free from necessity, only if they are understood to assert something with regard to an actual part of actual time. They must involve necessity as soon as the distinction between 'This is' and 'This was' is disregarded. It would seem, in fact, to be a mark of the sort of existence which they predicate that it is in time. They may affirm 'This exists,' or 'This has existed,' but if they take the general form 'This is,' that must always be understood to mean no more than 'This always has been, is now, and always will be,' and can be strictly analysed into as many different judgments as time is divisible into separate moments.

If, therefore, the difference between the empirical and *a priori* lay primarily, as Kant implies, in the nature of the judgment, not in that of the concept, only existential propositions could be empirical. In order to represent even 'This body is heavy' as an empirical proposition, it would be necessary to analyse it into the form 'Heaviness and the marks of body exist here and now'. But this is certainly not its whole meaning. We must, therefore, suppose that in order to obtain a clear definition of what Kant meant by empirical propositions, we must base it upon the nature of the

¹ Even these involve the necessary properties of time; but this point may be reserved for later consideration.

concepts used in them. Empirical concepts are those which can exist in parts of time. This would seem to be the only manner of distinguishing them. And any proposition into which an empirical concept enters may be called empirical.

Kant himself does recognise the necessity involved in such a proposition as 'This body is heavy,' although, for reasons which will appear hereafter, he states it in a somewhat different way. The main object of his 'Analytic' is to show that any such judgment involves a 'synthesis of the manifold of sense-intuition,' which is 'necessary *a priori*' (p. 126). But he regards this synthesis rather as necessary in order to bring mere perceptions into relation with the 'unity of apperception,' than as directly involved in the empirical judgment. Moreover, in order to explain how the forms of synthesis can apply to the manifold, he introduces the inner sense as mediator, and describes the judgment as converting the psychical connexion of the presentations into an objective connexion rather than as applying the categories to a mere manifold, which cannot properly be described as psychical. Accordingly he gives as the ultimate empirical judgment, out of which the application of substance and attribute produces 'Bodies are heavy,' the subjective judgment 'When I carry a body, I feel an impression of heaviness,' instead of that given above 'Heaviness and the marks of body exist together.'¹ He does not seem to see that his subjective judgment already fully involves the category in question. A statement about my feelings is just as 'objective,' in the required sense, as a statement about what is conceived as in space.

With the above definition, therefore, it is obvious why 'Body is heavy' should be called empirical; whereas, if absence of necessity had been the mark required, it would have been difficult to find a reason. For this proposition does not only involve, like 'This body is heavy' or 'All bodies are heavy,' the necessary judgments that body is a thing, and heaviness an attribute; it asserts a relation between a 'heaviness' and 'corporeity' such as no experience can prove or disprove. If we found a body which was not heavy, that would indeed lead us to deny the truth of the proposition; but it would also entitle us at once to the opposite necessary proposition 'Body cannot be heavy.' And this is just what holds of $2 + 2 = 4$. It is perhaps inconceivable to us now that two and two should not make four; but, when numbers were first discovered, it may well have been thought that two and two made three or five.

¹ P. 121, cf. also *Prol.*, p. 54 n.

Experience, no doubt, must have been the means of producing the conviction that this was not so, but that two and two made four. The necessity of a proposition, therefore, is not called in question by the fact that experience may lead you to think it true or untrue. The test of its necessity lies merely in the fact that it must be either true or untrue, and cannot be true now and untrue the next moment; whereas with an existential proposition it may be true that this exists now, and yet it will presently be untrue that it exists. The doubt about the truth of 'Body is heavy' would seem to proceed chiefly from our uncertainty as to what we mean by 'Body' and by 'heavy'. We cannot recognise instances of them with as great precision as we recognise instances of number; and hence we cannot be sure whether the truth of our proposition may not be overthrown. The proposition is arbitrary solely in this sense. There would seem no doubt that we mean by it to assert an absolute necessity; but between what precise concepts the necessary relation, of which we are certain, holds, we must leave to experience to discover.

From the foregoing analysis it would, therefore, appear that the true distinction upon which Kant's division of propositions into *a priori* and *a posteriori*, necessary and empirical, is based, is the distinction between concepts which can exist in parts of time and concepts which seem to be cut off from existence altogether, but which give rise to assertions of an absolutely necessary relation. Kant would seem to include among empirical propositions all those in which an empirical concept is used; whether the proposition asserts a necessary relation between an empirical and an *a priori* concept, or between two empirical concepts. What it is important to emphasise is that these two kinds of proposition are not distinguished by the absence of the marks which he gives for the *a priori*; they both include both necessity and strict universality. Empirical propositions would therefore include a wide range of propositions, differing very much in the meaning of their assertions. They seem to extend upwards from mere assertions of the existence of this or that, of the type 'Heaviness exists here and now'; through propositions of the usual categorical form 'This body is heavy,' which include necessary propositions in their meaning, but at the same time imply an assertion of existence; to propositions which assert existence at every time, while still retaining the element of necessity included in the last, like 'All bodies are heavy'; and finally to those propositions, upon which alone the validity of the last class can be based

—propositions which assert a necessary relation, without any implication of existence whatever, of the type ‘Body is heavy’. The only common element in all these different classes would seem to be that they all make assertions with regard to some empirical concept, *i.e.*, a concept which can exist in an actual part of time. The second and third classes are mixed and involve necessity, because there is also included in them an assertion with regard to an *a priori* concept. To all of them Kant would seem to oppose as purely *a priori* propositions, those which make an assertion solely with regard to *a priori* concepts and which for that reason can imply no assertion of existence, since an *a priori* concept is one which cannot exist in the limited sense above explained.

The line of division, therefore, upon which Kant's Transcendentalism is based, would seem to fall between propositions involving empirical concepts and those which involve none such; and an empirical concept is to be defined, not as a concept given by experience, since all concepts are so given, but as one which can exist in an actual part of time. This division is necessary in order to include all the various kinds of propositions which Kant includes under the term empirical, many of which involve *a priori* concepts. If the division were to be based on the nature of the propositions, as such, as Kant pretends to base it, we saw that pure existential propositions alone could be thought to have a claim to form a class by themselves, as empirical propositions. These do indeed obviously form the basis of the other division; for a simple concept cannot be known as one which could exist in time, except on the ground that it has so existed, is existing, or will exist. But we have now to point out that even existential propositions have the essential mark which Kant assigns to *a priori* propositions—that they are absolutely necessary.

The distinction of time was said to be ultimate for an existential proposition. If this is so, it is obvious that necessary propositions, of the kind which Kant endeavours to establish in the *Aesthetic*, are involved in them. It was pointed out that a pure existential proposition could only assert the existence of a simple concept; all others involving the *a priori* concepts of substance and attribute. If now we take the existential proposition “Red exists,” we have an example of the type required. It is maintained that, when I say this, my meaning is that the concept “red” and the concept “existence” stand in a specific relation both to one another and to the concept of time. I mean that “Red

exists now," and thereby imply a distinction from its past and future existence. And this connexion of red and existence with the moment of time I mean by "now," would seem to be as necessary as any other connexion whatever. If it is true, it is necessarily true, and if false, necessarily false. If it is true, its contradictory is as fully impossible as the contradictory of $2 + 2 = 4$.

But the necessity thus involved in existential propositions does not do away with the importance of Kant's distinction between the empirical and the *a priori*. So far as he attempts to base it upon the fact that what is empirical alone is "given in experience" and may be referred to "sense," it must indeed be given up; but as against the English philosophers, who held the same view about sense-knowledge, it retains its full weight. The Transcendental Deduction contains a perfectly valid answer to Hume's scepticism, and to empiricism in general. Philosophers of this school generally tend to deny the validity of any propositions except those about existents. Kant may be said to have pointed out that in any of these propositions, which the empiricists considered to be the ultimate, if not the only, data of knowledge, there was involved by the very same logic on which they relied to support their views, not only the uniform and necessary succession of time, and the geometrical properties of space, but also the principles of substance and causality. He does not, indeed, thereby prove the truth of the axioms and principles in question; but he shows that they are at least equally valid with, and more ultimate than, those upon which empiricism builds. Although, therefore, it seems no longer possible to hold, as Kant held, that a reference to existents is necessary to any proposition that is to claim the title of "knowledge," and that the truth of such propositions can alone claim *immediate* certainty; although, on the contrary, it seems that existential propositions are only a particular class of necessary proposition: yet the transcendental deduction is still important. A deduction from the "possibility of experience" does not indeed really represent the nature of Kant's argument. For the possibility of experience presupposes that we have experience, and this again means that certain existential propositions are true: but this does not involve the truth of any particular existential propositions; although its truth is involved in theirs. What Kant really shows is that space and time and the categories are involved in particular propositions; and this work is of greater value than a deduction from the possibility of experience would have been. He does not indeed recog-

nise that the propositions from which he is deducing are themselves necessary, and that there may therefore be other necessary propositions, with a like claim to certainty, not to be deduced from them. He therefore imagines himself to have exhausted the field of knowledge; whereas in fact he has only shown certain logical connexions within that field. But it is not here proposed to dispute the truth of particular existential propositions; and though, unlike Kant, we admit them to be merely assumed, we may be thankful that he has shown us what can be inferred from them.

Moreover, Kant's distinction between space and time on the one hand, and the categories on the other, also retains its value, though we can no longer describe their general difference as he did. It seems rather to be this: That time alone is sufficient for some sort of experience, since it alone seems to be involved in the simplest kind of existential proposition, *e.g.*, "Pleasure exists"; and that again time and space together will suffice to account for the possibility of other pieces of knowledge, without the use of the categories. It is necessary to make a fresh assumption of propositions such as even Hume recognised, and such as are universal in physical science, in order to find the principles of substance and accident and causality implied. In all such propositions time and space are presupposed as well, but these categories are not implied in every proposition involving time and space.

The simplest existential propositions are then to be regarded as necessary propositions of a peculiar sort. In one kind the necessary properties of time are involved; in another those of space also. But though this fact, which Kant points out, is very important against empiricists, we cannot regard it with him as establishing the truth of geometry and of the corresponding propositions about time. For existential propositions which are false, as well as those which are true, involve the same propositions about space and time. No existential proposition of any sort seems discoverable, which might not thus be false; not even the famous "*cogito*" is indubitable. We cannot, therefore, take the "possibility of experience," in any possible sense, as sufficient warrant for our knowledge of space and time; and we must regard the truths of geometry as independently known for true, just in the same way as some existential propositions are so known.

Similarly, those propositions which involve substance and attribute are not sufficient to establish the truth of the propositions thereby involved. The permanence of substance is

indeed, Kant shows us, as certain as the empirical propositions which Hume took to be alone certain. But its truth must be known independently of these, since it is involved also in false propositions of this type. It would, in fact, be true, whether any such propositions were true or not. Kant has only taught us that, if any of them are true, it must be so likewise. He failed to see that its truth may be asserted immediately on the same ground as theirs ; for he was misled by the previous course of philosophy to suppose that there was something more immediately indubitable in them. Their truth is, in fact, the last thing which common sense doubts, in spite of its familiarity with erroneous perceptions. Kant's merit was in pointing out, what he himself did not recognise, that their being undoubted does not prove them to be indubitable ; or rather, that the doubt which is cast on some of them proves conclusively, what common sense, in its contentment with rules that have exceptions, does not perceive, that they are highly doubtful.

Our result then is as follows : That a judgment is universally a necessary combination of concepts, equally necessary whether it be true or false. That it must be either true or false, but that its truth or falsehood cannot depend on its relation to anything else whatever, reality, for instance, or the world in space and time. For both of these must be supposed to exist, in some sense, if the truth of our judgment is to depend upon them ; and then it turns out that the truth of our judgment depends not on them, but on the judgment that they, being such and such, exist. But this judgment cannot, in its turn, depend on anything else, for its truth or falsehood : its truth or its falsehood must be immediate properties of its own, not dependent upon any relation it may have to something else. And, if this be so, we have removed all reason for the supposition that the truth and falsehood of other judgments are not equally independent. For the existential judgment, which is presupposed in Kant's reference to experience or in Mr. Bradley's reference to reality, has turned out to be, as much as any other, merely a necessary combination of concepts, for the necessity of which we can seek no ground, and which cannot be explained as an attribution to 'the given'. A concept is not in any intelligible sense an 'adjective,' as if there were something substantive, more ultimate than it. For we must, if we are to be consistent, describe what appears to be most substantive as no more than a collection of such supposed adjectives : and thus, in the end, the concept turns out to be

the only substantive or subject, and no one concept either more or less an adjective than any other. From our description of a judgment, there must, then, disappear all reference either to our mind or to the world. Neither of these can furnish 'ground' for anything, save in so far as they are complex judgments. The nature of the judgment is more ultimate than either, and less ultimate only than the nature of its constituents—the nature of the concept or logical idea.

IV.—JAMES ARBUCKLE AND HIS RELATION TO THE MOLESWORTH-SHAFTESBURY SCHOOL.

BY W. R. SCOTT.

SIR JAMES MACKINTOSH, in writing of Hutcheson's life at Dublin, says that Ireland "is truly *incuriosa suorum*,"¹ and this remark applies with greater force to the work of James Arbuckle, the contemporary and friend of Hutcheson; though in introducing it one is liable to make an Irish "bull," since Arbuckle, though he lived in Dublin, was of Scotch extraction, and had been educated at Glasgow.

It would scarcely be necessary to rake together the ashes of the past to form an estimate of an obscure minor thinker such as Arbuckle, were it not that his work constitutes a few pages in what might be described as a lost chapter in the history of British Philosophy. Whether Hutcheson's title as "father" or "founder" of the "Scottish Philosophy" be accepted or not, his connexion with Shaftesbury needs some fuller explanation than it has yet received. All historians of Philosophy, who treat of Hutcheson, show that there was a more or less close connexion between his system and the ethical "virtuoship" of Shaftesbury. Now Shaftesbury was essentially English, by birth, residence and mode of thought, while Hutcheson was, of course, best known as a celebrated and influential Professor at Glasgow. Yet Hutcheson's views are generally taken as having been fully formed prior to his arrival at Glasgow, and there is abundant evidence to show that he received his main philosophic impetus while living as a young man at Dublin. How exactly this came about could scarcely be explained within the limits of a single article, and one must be content with a bare mention of the interesting fact that in Shaftesbury we have the germ of what is known as the "Scottish Philosophy"—that is, the germ may be said to be English—this germ was developed by Hutcheson and others at Dublin, and the complete product gained academic expression and popular recognition in Scotland. Were we not growing familiar with the somewhat

¹ *Dissertation on Ethical Philosophy*, p. 204.

commercial expression "Philosophy made in Germany," to say that the so-called Scottish Philosophy was made in Ireland might occasion something of a mental shock!

The full discussion of the influences to which Hutcheson was subjected in Dublin would be somewhat lengthy, owing to the number of events in his life that are difficult to determine, and also to the fact that his friends are singularly elusive to a biographer; for, while all of them were men of mark and importance, they seem to have been unanimous in leaving few traces of their thought behind them. It is for this reason that the history of Hutcheson's early development may be said to be almost, if not quite, a lost chapter in the History of Philosophy, and, therefore, the few pages of it that can be recovered, which deal with his friend Arbuckle, gain a reflected interest to which they would scarcely be entitled upon their intrinsic merits.

The earliest account of Arbuckle is contained, in MS., in a copy of his poem *Glotta*, which is preserved in the Library of the British Museum. It runs as follows: "James Arbuckle was a native of Ireland, and, after going through his University course, at Glasgow College, he settled, as a schoolmaster, in the north of Ireland. He possessed genius, as his poems show. He was the author of *Snuff—a Poem by Mr. James Arbuckle*, printed at Glasgow in 1717. 8vo. He addressed laudatory verses to Allan Ramsay, who, in January, 1719, wrote an Epistle, in verse, to Mr. James Arbuckle. (See Ramsay's *Poems*, 1800, 8vo., vol. i., p. clxxxiii., and vol. ii., p. 359). Arbuckle projected a translation of Virgil but did not finish it.

"He died in 1734, aged 34."

Notwithstanding the meagreness of this brief sketch, it is incorrect in several particulars, more especially in the date of Arbuckle's death, which, as will be seen below, is antedated by some dozen years. This being so, it is doubtful whether any reliance can be placed upon the statement that in 1734 he was thirty-four years of age, but this is the only clue to the date of his birth, which would thus be assigned to the year 1700. Failing such untrustworthy evidence, approximate dates might be mentioned as between 1697 and 1705.

From other sources one gathers that James Arbuckle was the son of a Presbyterian minister of the well-known Dublin Congregation of Usher's Quay.¹ Like most of the Presbyterian clergy in Ireland, he was of Scotch extraction, and

¹ *Sermons of John Abernethy.* London, 1748, i., p. 39.

looked to Scotland as his home, regarding his position in Ireland rather as that of a colonist than as that of a native of the country. Hence it was only to be expected that he sent his son to Scotland to the University of Glasgow. It was therefore at Glasgow that James Arbuckle took his M.A. degree in 1720.¹

Arbuckle may have met Hutcheson at Glasgow, as he seems to have matriculated just before Hutcheson left to return to Ireland. He found himself at once plunged into a scene of turmoil and strife. At this period Stirling was Principal. He appears to have been a man of slight scholarship, and his influence was rather in the direction of the academic loaves and fishes, than the maintenance either of discipline or culture. To increase his own influence, he represented that, owing to the state of political feeling after the Rebellion, "it might occasion strife to call the students together to choose a Rector," and, therefore, he claimed the right of nominating three names, from which list the Rector was to be chosen by the Professors (or Regents as they were then), thereby depriving the students of one of their most cherished privileges.² This led to the outbreak of 1718, when some of the Professors took the students' side, and were even accused of exciting the students to riot.³ Arbuckle seems to have been prominent in the dispute, and he came in collision with the Principal, through his writing Prologues for the students' performances of "Cato" and "Tamburlaine"—performances avowedly designed as a protest against the Principal. If Stirling was not a scholar, Arbuckle found him a "good hater," and on several occasions his academic career appears to have been in danger of sudden curtailment. In the Students' Pamphlet already mentioned, it is alleged that Stirling went so far as to obtain an act of the Senatus "to suppress Immorality," which was really directed against

¹ *Munimenta Univ. Glasg.*

² *A Short Account of the Late Treatment of the Students of the University of Glasgow.* Dublin, 1722, pp. 5, 6. The copy of this very rare pamphlet in the Glasgow University Library is endorsed, "said to have been written by Mr. Robertson, probably the same who was expelled in 1725, but the sentence taken off by visitation in 1727," and in another place "sometimes ascribed to James Arbuckle". Some of the references to Arbuckle are not such as he would have been likely to have written himself, nor is the style like that of his prose works. It is very probable that the pamphlet was the work of several students, and that Arbuckle bore his part in its composition. (An account of Robertson's career at Glasgow will be found in the *Christian Moderator*, ii., p. 308.)

³ Wodrow MSS. (Advocates' Library, Edinburgh), No. 41, Nos. 95-9.

a literary club of which Arbuckle happened to be a member.¹ When Arbuckle entered as a Theological student in 1721, he was more in the Principal's power, and his friends asserted that Stirling endeavoured to damage his character, and even prevent his obtaining admission to the Communion.² Possibly owing to the Principal's condemnation, Arbuckle changed his mind with regard to his profession, and we find him gaining the degree of M.D. in 1724.

Not only had Arbuckle taken a prominent part in what might be called college politics, but, at the same time, he published several poems which gained him a considerable local reputation. In 1719 he published *Snuff—a Poem*, also *An Epistle to Thomas, Earl of Haddington, upon the death of Joseph Addison*, and, in 1721, *Glotta—a Poem*, upon the title-page of which he describes himself as a member of the University of Glasgow. These are written in the metre Pope had made, if anything, too popular; and *Glotta* is the only one that calls for remark. It is of considerable interest as giving a description of the University and the teaching of the time, and it is very creditable to Arbuckle that he does not introduce any contentious subjects, confining himself to a description of the University and its scholastic activity. If any indication of Arbuckle's tastes can be drawn from the amount of space devoted to the different subjects, it would appear that he was most impressed by Natural Philosophy. The lines devoted to the Philosophical department—

Or what more nearly touches human kind,
The powers and Nature of Eternal Mind
Which only conscious of its being knows
*Th' Eternal Source from which that being flows*³—

clearly show that, as a student, Arbuckle was under Cartesian influence, and this is of interest in view of the fact that four years later he will be found to have developed in quite a different direction.

In 1724, then, having finished with the University, Arbuckle returned to Dublin, though there is a tradition that he taught a school between the completion of his university course and his arrival in Dublin,⁴ this seems unlikely since we find him well established in Dublin in 1725, and having made numerous friends, which would be difficult if he had only just arrived.

The most important event in Arbuckle's early life, and

¹ *Short Account, ut supra*, p. 24.

² *Ibid.*, p. 25.

³ *Glotta—a Poem*, Glasgow, 1721.

⁴ MS. prefixed to an edition of *Glotta*, in the Library of the British Museum, *vide supra*.

one destined to have considerable influence upon the history of Philosophy, was his introduction to Lord Molesworth—perhaps by Hutcheson. Molesworth had been a wealthy merchant, and had held a diplomatic appointment at the Danish Court, which occasioned his *Account of Denmark as it was in the Year 1692*. This work introduced him to the notice of Locke and Shaftesbury. He corresponded with the latter as well as with Toland,¹ and his letters show an appreciation of philosophic questions and methods. At this time he was a prominent figure in Dublin society, and, while still deeply interested in parliamentary affairs, he found a more congenial occupation in entertaining and conversing with persons of literary and philosophic tastes. Even Swift, who was chary of praise, writes: "I am no stranger to his Lordship, and, excepting in what relates to the Church, there are few persons in whose opinions I am better disposed to agree".²

Molesworth has left no writings dealing with Philosophy, but it is easy to gather the general drift of his opinions. Owing to his personal relations with many of the most prominent thinkers of the day, he was wholly on the side of what was then the most modern and advanced thought, and he was most influenced by his friend Shaftesbury. It is true that Shaftesbury's letters were written some years before Molesworth met Arbuckle and Hutcheson, but it can be shown that he rather adopted than diverged from Shaftesbury's principles as time went on. As late as 1722, three years before his death, he wrote to Archbishop King, the author of *De Origine Mali*, evidently defending Shaftesbury's view of moral obligation, which King criticises in a letter still extant,³ and, if further proof were needed, it would be found in the early essays of his followers which, as will be seen, were published in the *Dublin Journal*.

It has sometimes been said that Shaftesbury had a few isolated adherents but that there was no Shaftesbury-school; yet, owing to Molesworth, his Philosophy was perpetuated and became fruitful amongst a group of earnest young thinkers at Dublin. Molesworth must have been a man of singular power in gaining the conviction of others, for,

¹ *Biographia Britannica*. There is an interesting letter from Archbishop King to Molesworth (preserved in the library of Trinity College, Dublin) in answer to one of Molesworth's in which he had defended Toland. Needless to say, King is severe on the "Atheist".

² *Swift's Works*, ed. Sir W. Scott, viii., p. 299.

³ King to Molesworth, 2nd Jan., 1722. King's MS. Letters, *ut supra*.

though he himself wrote nothing of a philosophical nature, his conversations left a deep impress upon the men he gathered round him. His environment and circle of friends at Blanchardstown—his country-seat near Dublin—recall some of the best traditions of what are often called the “Greek Schools”. Here we find a man, past the prime of life, who had spent his youth in travel and the service of the state, who had come in contact with well-known thinkers of his day, engaged in the discussion of abstract theories with younger men—probably without any view of teaching as the word is now understood.

Hutcheson, Edward Synge, a Fellow of Trinity College, whom Berkeley succeeded as Bishop of Cloyne, as well as several others, were intimates of Molesworth and participated in the discussions at Blanchardstown. With the advent of Arbuckle a desire for literary expression manifested itself amongst the little group of disciples of Shaftesbury. At this period the essay was the favourite “literary vehicle,” and, in all probability, Molesworth had sufficient influence with the proprietor of a new Dublin weekly paper, called the *Dublin Journal*, to induce him to accept all articles or letters sent him by Arbuckle, who signed himself “Hibernicus” and acted as general editor, and later on the letters of the Molesworth *coterie* were added to by others from outside sources. The *Dublin Journal* was a medium-sized octavo, a little smaller than the *Spectator* or *Saturday Review* of to-day, consisting of four pages, containing foreign and local news, with a few advertisements. Arbuckle’s articles, written in the form of letters and addressed to the “Author of the *Dublin Journal*,” occupied the position of the leading article. Early numbers of this paper are extremely rare, a few are preserved in the libraries of Trinity College, Dublin, of Archbishop Marsh, and of the Royal Irish Academy, but the best collection is that in the National Library (Dublin), which begins with No. 125, dated 19th August, 1727, and contains about 220 numbers extending with a few gaps till 25th December, 1731.

Arbuckle’s first article appeared in the issue of 3rd April, 1725, and, with the aid of his friends, he contributed weekly until 25th March, 1727. Had these articles not been collected and republished by the generosity of the second Lord Molesworth, all record of the Molesworth-Shaftesbury school would have perished.

The first letter, after explaining the general object, adds, that “several honest gentlemen have resolved to make the paper a canal for conveying to the public some little essays

they have lying on their hands".¹ When the whole series, amounting to 102 letters, was published in volume form in 1729, Arbuckle, in his dedication to the second Lord Molesworth (the first, who was the friend of Shaftesbury and founder of the "school," having died in 1725), mentions that many of his own contributions were composed under "Lord Molesworth's roof,"² and this suggests the guess that the members of the Blanchardstown *coterie* were in the habit of writing papers and submitting them to the judgment of the others.

The greater part of the Essays, which appeared in the *Dublin Journal* from 3rd April, 1725, to 25th March, 1727, are philosophical, and should be compared rather to Coleridge's *Friend* than to Addison's *Spectator*. Many of them were written by Arbuckle, six by Hutcheson, two by Samuel Boyse the theologian, and one is given up to posthumous verses by Parnell. The remainder, with one exception, are by writers unknown to Arbuckle, and most of these are deficient both in style and matter, yet these are the only papers that profess to deal with those topics of general interest that yielded such admirable results under the treatment of Addison and Steele. Those that emanate directly from the Molesworth *coterie* possess some interest as showing the same Shaftesbury influence, Hutcheson beginning to advance a little beyond what he had learned from Molesworth; he is academic, thorough, and, it must be admitted, a little wearisome; Arbuckle, on the other hand, if less original, expounds Shaftesbury with something of the brightness and *verve* that is such a prominent feature of the *Characteristics*. He writes freely, pleasantly, with point and force, and never scruples to drive home his most abstract theories by plain homely examples.

The death of Molesworth on 22nd May, 1725, removed one incentive to philosophical inquiries amongst some of his young friends, and Arbuckle's work in this direction ends with his publication of his articles in volume form in 1729. The next year he lost Hutcheson, who was elected Professor of Moral Philosophy at Glasgow; and, having met Swift, his literary energies took an altogether new direction. Swift had an utter contempt for philosophy, especially modern philosophy, and, finding that Arbuckle was possessed of a certain dry humour of his own, he promptly nicknamed him

¹ *Hibernicus's Letters: A Collection of Letters and Essays lately Published in the Dublin Journal.* London, 1729, i., p. 4.

² *Hibernicus's Letters*, i., p. 5.

"Wit-upon-crutches".¹ It would no doubt have been no small satisfaction to Swift's sardonic spirit to have known that this nickname is the only record of Arbuckle's personal deformity.

Owing, too, to the loss of his patron, Molesworth, he was dependent upon his profession, and this may have placed difficulties in his way which may have prevented him from continuing his philosophical work. As a medical man he seems to have enjoyed a considerable popularity, and it is pleasant to record the judgment of a contemporary, that "his charity to the poor in his attendance upon them, was conspicuous to all. And it is known to such as were intimately acquainted with him that he was industrious in finding out ways of serving persons in concealed distress of circumstances".²

For the remainder of his life his literary work is to be found in second-rate verses dealing with the literary and personal controversies of the day. Some of these are preserved in Swift's works, others in rare pamphlets and probably many more are lost amongst the mass of anonymous productions of this kind—or at least are difficult to trace.³

Although Hutcheson was several times in Dublin after his removal to Glasgow, he seems to have been unable to recall Arbuckle to his early devotion to Philosophy. In the MS. correspondence of Hutcheson with Dr. Drennan of Belfast there are frequent references to the philosophical opinions of almost all his other Irish friends, but Arbuckle's name only occurs twice—once in reference to a remittance of money for the use of an Irish student at Glasgow and again in connexion with a sample of Glasgow weaving,⁴ which becomes intelligible when one remembers Swift's

¹ *Swift's Works*, Faulkner's Edition, vol. xvii., p. 1, note.

² *A Sermon from Ecc. vii. 4, on the Death of Dr. Arbuckle, a Physician and Member of Wood St. Congregation, preached Jan. 4, 1747.* Dublin, 1747.

³ During the latter half of the year 1727 Arbuckle still continued to contribute articles to the *Dublin Journal* signed by Hibernicus. Nearly half of these are verses, and most of the remainder deal with popular subjects. The only one of a philosophical nature is that published in No. 127, on 2nd Sept., 1727, exposing scholastic quibbling. After 30th Jan., 1728, there do not appear to be any more Hibernicus letters, though it is quite possible that Arbuckle may have changed his *nom-de-plume* and contributed some of the economic articles.

⁴ "My wife has troubled you with a little bundle of thread, which she sent by one Clerk, a lad who deals in Linen cloath, the Thread must be sent to Dr. Arbuckle by the first safe opportunity."

MS. Letter of Hutcheson to Dr. Drennan dated 31st Jan., 1737 (in possession of Miss Drennan, Belfast).

pamphlets on the woollen industries and that Arbuckle was now in close contact with his views. This incident so small in itself is very typical of the break-up of the little Shaftesbury School; to his other friends, Synge, William Bruce, a well-known publisher, Abernethy, a Presbyterian minister, and Rundle, Bishop of Derry, Hutcheson sends the MS. of his books; to Arbuckle—his fellow contributor to the *Dublin Journal*—“a little bundle of thread”!

The closing years of Arbuckle’s life are devoid of any event of importance. He seems to have been a man cursed by a fatal facility of expression and versatility of talents. A thinker, something of a scholar, a physician, verse-writer, political economist and essayist, yet, with all his gifts, too indolent for sustained effort, unless encouraged by the influence of an older man than himself. He had early lost Molesworth and his philosophical activity ends. Then under the guidance of Swift, he returns to literature and verse, and here again, as the tragic gloom of old age closes round his friend, his work becomes less and less and finally ceases some years before his death which took place either in the last days of 1746 (Hutcheson died in the August of this year) or very early in 1747. Much as one may distrust the eulogy of conventional funeral sermons, there is something that rings true in that preached on 4th January, 1747, in memory of Arbuckle. “His openness,” the preacher concludes, “frankness and warm honesty of heart appeared in all his conversation and behaviour. No man could be more distant from professing anything he did not believe, or giving up anything he thought just and right, either from a feeble complaisance to others or from design. . . . The very man appeared to you at once without disguise, and one had always the same character to deal with. . . . His sound understanding and good sense, joined with largeness of heart, and warm affection were excellent qualifications for the sacred offices of friendship, which he discharged with the utmost generosity, steadfastness and fidelity.”¹

ARBUCKLE’S PHILOSOPHY.

Owing to Arbuckle’s thought clothing itself in, what he himself calls, the “loose and negligent” undress of the Essay, it is by no means easy to find the true starting-point of his theory. He seems to have interwoven his thoughts,

¹ Funeral Sermon, *ut supra*.

and then thrown down a tangled skein from which it is difficult to unravel the guiding thread.

One of several beginnings may be found in the conception of Happiness, "the search for which is the business and study of all mankind, and nothing is of greater importance to us in life".¹ As Butler proved, a few years later, Happiness is not to be understood as the "gratification of our appetites and inclinations,"² rather it has three essential elements, "Pleasure," Joy and Tranquillity. The first two of these are different forms of what is called "Delight"—the object of which is Beauty. "Pleasure" is described as the effect of "material and inanimate things" that are beautiful, joy arising similarly from the effect of "living and social beings".³

1. *Inanimate Beauty*.—That this pleasure exists and is "natural" or undervived is proved by the effect of an appropriate object upon us, which "is easier felt than described". In language anticipatory of Kant's "awe" of the "starry heavens," Arbuckle bursts into raptures over the beauties of nature: "We need only reflect on what we feel when we admire the awful arch of Heaven, either illuminated by one mighty ball of fire, or sow'd with innumerable stars; when we rejoice in the lovely appearance of the morning; when we survey the wonderful face of the great Ocean; or when we gaze on the milder charms of a rural Landskip, blooming fields, solitary shades and still waters".⁴ He scornfully asks, is there anything comparable to this in the feelings falsely called pleasures of Sense; and, from the uniformity and importance of the effect, goes on to show that there must be some standard of Natural Beauty. If it be objected that the appreciation of it is not original or "natural," upon the Lockian grounds of want of universality or the phenomena of acquired tastes, he replies that none of the pleasures of sense are universal, and retorts that the loss of the capacity of perceiving Beauty is universally considered to be one of the greatest misfortunes.⁵ At the same time, men are

¹ *Hibernicus's Letters*, i., p. 37. Cf. Shaftesbury, *Moralists*, part iii., § 3, and Hutcheson, *Inquiry into Original of our Ideas of Beauty and Virtue*, p. ix.

² *Hibernicus's Letters*, i., p. 38. Cf. Butler's *Sermons*, Preface and Sermon XI.

³ *Ibid.*, p. 40. It may be remarked that this division gives no place for the delight due to the beauty of animals.

As will be seen Arbuckle uses pleasure in a special sense, in fact he denies that sensual pleasures are pleasures at all, and therefore the only true pleasure is that arising from the recognition of Beauty.

⁴ *Ibid.*, i., p. 40.

⁵ *Ibid.*, i., pp. 43-4.

singularly inconsistent in that, while they jealously cherish the capacity, they suffer it to be overlaid by lower and fictitious pleasures which, in time, destroy it altogether. Further, while the so-called pleasures of sense are individual and exclusive, the "pleasures" of Beauty are open to all, and in the truest sense universal—negatively because they cannot be monopolised, and positively because they are infinite in number.

2. *The Beauty of Living and Social Beings.*—The joy or "rational delight" due to Personal Beauty is most obvious in the human form (and especially under the influence of what has happily been called Shaftesbury's "Weiber-Cultus"¹ in woman's beauty)—"in man's erect position, his majestic looks and the expressive disposition of his features".² In a thoroughly Greek sense³ he interprets these as indices of a beautiful Soul, for which the body is a flexible mask that takes its shape and form. "When we trace in a man's Person, his countenance, or his behaviour, the Lineaments of an heroic undaunted soul, of a kind and generous temper, or of strong sense and reflexion, we cannot forbear a very sudden approbation and esteem."⁴

Thus personal beauty becomes the symbol of beauty of the soul or moral beauty, and this is described, after Shaftesbury, as being concerned with the social and benevolent affections, though Arbuckle is careful to state that he is not prepared to determine the respective positions of Benevolence and Self-Love. In fact, from his strictly æsthetic point of

¹ Giżycki, *Philosophie Shaftesbury's*, p. 15. Arbuckle gives rather a humorous turn to this idea by saying that "The Ladies, if they would preserve their charms, must, at least, take as much care to adjust their minds as their dress and look into their bosoms as often as their glass"—adding that this might furnish material for an amusing advertisement, "*The only true royal beautifying fluid for the face!*" *Letters*, i., pp. 24-5. This would have given Swift a good example of "bathos".

² *Ibid.*, i., p. 49.

³ Shaftesbury is sometimes called a modern Greek, and that, in the analogy between Virtue and the Arts, he reproduces Plato (Fowler's *Shaftesbury and Hutcheson*, p. 98). The analogy between Plato and Shaftesbury (including his followers) may be pushed too far. Plato was a consummate literary artist, who distrusted his artistic impulses in Philosophy. Shaftesbury and his followers, on the contrary, far from distrusting their artistic impulses, excited them as much as possible, sometimes to the exclusion of reason (*cf.* Mr. Leslie Stephen on Shaftesbury's style, *Fraser's Magazine*, vol. vii., p. 78). Mackintosh (*Dissertation*, p. 108) unconsciously hits off Shaftesbury's reproduction of the Greek spirit by calling it *modern antique*—which is strictly true *but in the sense of the "virtuoso" of the present day.*

⁴ *Hibernicus's Letters*, i., p. 21.

view, the beauty of a Benevolent action consists partly in the peculiar manner in which it appeals to the imagination ; and partly also in its being an instance of "order, symmetry, and perfection". In fact, in Arbuckle's frequent references to Benevolence, he merely reproduces Shaftesbury unconsciously, and while Benevolence is not essential to Shaftesbury,¹ it is still less so to Arbuckle, since, if morality be no more than the lovely or "comely life," the exact position of Benevolence is of comparatively little importance.

If Arbuckle had continued his philosophical work, one might hazard the guess that Benevolence would have soon lost much of the apparent philosophic importance it possessed for him as a young man of five and twenty ; and, as he concentrated his attention more and more upon the beautiful life, he would have been forced to choose whether to make Beauty "natural" and primary and to have established Benevolence, as choiceworthy, *because beautiful*, or, on the contrary, if he had followed out some of the admissions he makes, when dealing with practical needs, he might have adopted Hutcheson's position in representing (moral) Beauty as joy-giving, because arising out of Benevolence. The portions of his *Letters*, where Benevolence is introduced, seem to lack cohesion, as if he were repeating what he had learned, but not digested, unconscious of the logical incongruity of thought.

3. *Tranquillity*.—Naturally Arbuckle dissents from the Stoic theory of "apathy," which, he contends, is not tranquillity, but the extinction of all desire—"a tranquillity which stocks and stones enjoy to the highest perfection".² It is strange that, in this connexion, he is quite silent with regard to the Epicurean tranquillity, which, though it differs from his own use of the term, is, at least, much nearer to it than the stoic *ἀπάθεια*, possibly, remembering the popular audience he supposed himself to address, he was deterred by the reproach attached to the term "Epicurean," even so late as the early portion of the last century.

Since the Beauty of objects, human beings and their lives presupposes external objects, Arbuckle strongly condemns the self-sufficingness of the Stoic "wise man," and, after again analysing the temporary nature of "short and unruly gusts of passion"³ which end in satiety and disgust, and showing the unsatisfying character of certain typical in-

¹ Martineau, *Types of Ethical Theory*, ii., p. 509.

² *Hibernicus's Letters, ut supra*, i., p. 216. ³ *Ibid.*, p. 221.

stances of the sensual and physical pleasures of his time,¹ he concludes, by a process of exclusion, that it is only in the delight due to Beauty that tranquillity is to be found, "for all the pleasures of Sense are short and fugitive; grow fainter with age, and duller by repetition; cannot be revived but after some intervals; and must wait the return of appetite, which are (*sic*) not always at any man's call, and seldom at theirs who indulge them most. But the pleasures of Imagination are free from all those inconveniences; and are both of larger extent and longer duration. They comprehend, not only all that is beautiful in Nature, but all that is elegant and curious in Art. Nor are they even confined to objects that have a real existence, but can be raised by intellectual images, and Beings of the Mind's own creation.² The material and the moral world are equally the scenes of these refined pleasures; and the mind receives the like amiable ideas of Beauty, Order, Harmony, from the structure and contrivance of both."³

Arbuckle's treatment of Tranquillity presents two points of interest. Here, as elsewhere, at times, he is not so optimistic as Shaftesbury, often he writes, not merely in a tone of world-pity, but almost of despair; and, while never doubting the ideal of the "life beautiful," he sometimes seems to lose hope of its practical realisation. "There passes not an age," he writes, "wherein starts not up once or twice some great imperial destroyer, who, to gratify a brutal pride, and insatiable lust of dominion, lays waste whole provinces, countries and nations; invades Nature herself; and the more effectually to drown the cries of the universe, abolishes, perhaps, a whole language in the destruction of those who spoke it. . . . Can the Happiness of Virtue be perfect and entire amidst a scene so filled with disagreeable and shocking events?"⁴ His optimism, however, is re-established by the "encouragement he has to look up for a future place of rest," where a higher and unmarred beauty will atone for the imperfections of the present.

In the second place, under the head of Tranquillity, Arbuckle makes some general remarks relative to Con-

¹ *Hibernicus's Letters*, ii., p. 147.

² Arbuckle here contradicts his previous assertion that Beauty arises from the appreciation of *External* objects. The reconciliation of these inconsistent statements may be found in the theory of the imaginative dramatisation of the self, which is an eighteenth century approach to the later problem of the sensibility, namely, how the activity of the self can become passive for purposes of perception.

³ *Ibid.*, ii., pp. 104-5.

⁴ *Ibid.*, i., p. 228.

science. The vices of mankind are "infectious to such a degree" that they depress the individual and make him doubtful of his right to his own approbation, yet, upon consideration, the man who has fashioned for himself a thoroughly beautiful life cannot but be conscious of it, for "there issues from Conscience to the mind its own *picture*, *pure and unspotted*,"¹ and this essentially aesthetic consolation is reinforced by the religious one of man's relation to the moral government of God.²

The slightness of Arbuckle's references to Conscience sufficiently differentiates him from Shaftesbury and, especially, from Hutcheson. Nowhere in the *Letters* does the expression "moral sense" occur. In fact, Arbuckle's general point of view is exclusive of a moral sense. With him Beauty, though fundamentally the same, has two species—the one created (as in Nature) and the other creative or productive (as in Art, Literature and Morals). Postponing for the present the discussion of the psychological character of the appreciation of Beauty, Arbuckle's position may be summarised as presenting points of contact with and divergence from that of Shaftesbury and Hutcheson in his earlier works, who held such appreciation to be a reflex feeling. Now, if Arbuckle distinguished his Conscience (in the sense of Hutcheson's moral sense) from the appreciation of the Beautiful in Art, it would become a further reflex act, that is the reflex of an already reflex state.

To Arbuckle, it would appear, man is ethically an artist, whose work is his own life, which he views as he would a picture he had painted, and approves it, according to canons of artistic excellence—to modify an expression of Aristotle's, *Virtue is ἀρετή τοῦ ἐν βίῳ καλοῦ κάγαθοῦ*.

Such an artistic "taste," however, is oppressed by a latent "dialectic". The artist in conduct feels there should be an inevitableness in the sequence of Happiness upon Virtue. Yet "no one virtuous action is its own sufficient reward" . . . and the solution is found by invoking the Deity as a *Deus ex machina*, because, "though Virtue be indeed the direct and natural road to Happiness, yet it frequently fails of actually being so, and, for that reason, stands in need of some superior power to strengthen us in the constant practice of it."³

Beauty.—It therefore follows that Beauty, being of the greatest importance to Arbuckle—more so than to Shaftesbury or Hutcheson—deserves a more thorough investigation

¹ *Hibernicus's Letters*, i., 220. ² Cf. Butler, *Analogy*, ch. ii., iii.

³ *Hibernicus's Letters*, ii., p. 325.

than it had received from the former. The harmonious and symmetrical system of Shaftesbury needs to be both explained and expanded to show how it can apply to both natural and moral Beauty. Hutcheson, by his express division of the Inner sense into an *Aesthetic* and Moral Sense, is enabled to give a definition applicable, as he thought, to Natural and Artistic Beauty—namely, the presence of “Uniformity amidst variety”.¹ Arbuckle rather shelves the question by saying that the “inquiry wherein Beauty properly consists is foreign to the present design”.² Partly following Shaftesbury,³ he makes a start from Bacon’s reduction of Beauty to three characteristics—Colour, flavour and motion, which he interprets, in personal beauty, as a fine complexion, regularity of feature, “and that *Je ne saay quoi* which we commonly call a good air”.⁴ Of these the latter is the most important, as being the play of feature, which is the symbol of “that motion of mind which is necessary to communicate an agreeable motion to the face and spread itself in those thousand nameless graces and amiable dimples that strike the beholder with joy and delight”.⁵ Thus, in the outer world, Beauty consists of Colour, order or arrangement, and movement, while in the inner world of art and conduct there is an energy which realises in action a product that shows similar or corresponding traces of order in relation to its environment. Elsewhere, Arbuckle seems to incline to the theory of Leibnitz that this order arises out of minute differences, for each of which there is a sufficient reason, and hence the ground of beauty would be a rational appreciation of the harmony of the universe, consisting of a symmetry composed of infinite diversities.⁶ This view, however, is mentioned incidentally, and is not developed.

The manner in which Beauty is apprehended.—Arbuckle always uses the greatest reserve in speaking of the way Beauty is appreciated. As already mentioned, he never uses the expression “moral sense” in reference to Shaftesbury’s moral beauty, and as a rule the term “sense” occurs very rarely in his work. He frequently speaks of “taste,” but rather in a strictly aesthetic signification than as an exact equivalent

¹ *Inquiry Concerning Beauty*, §§ 2-3.

² *Hibernicus’s Letters*, i., p. 40.

³ Shaftesbury’s *Inquiry Concerning Virtue*, i., part ii., § 3.

⁴ *Ibid.*, i., p. 23.

⁵ *Ibid.*, p. 24.

⁶ *Ibid.*, ii., p. 340. It may be noted that Hutcheson (*Inquiry Concerning Beauty*, § 3) instances this theory of Leibnitz as a case of a perversion of the sense of Beauty—what he calls fantastic beauty.

for Shaftesbury's more hedonistic term, "relish". "Taste" is a natural capacity, but susceptible of cultivation, and even requiring it. Here he parts company with Hutcheson, who, sometimes in his earlier works, speaks as if he used the word sense simply as indicating the passive side of the mind.¹ Arbuckle's point of view is different, probably as a poet, he recognises, with regard to works of Art, that any such account of the appreciation of the Beautiful neglects the importance of the creative imagination. Under the fanciful heading of "Castle-building" he vindicates the productive powers of "fancy," for, he thinks, "whatever may be the abuses of a loose fancy in its wild rambles after chimerical pleasure," being a natural faculty, it must have a legitimate use. This consists in drawing up "ideal memoirs of our future actions and success," thereby constructing a romantic history, for, after all, what is history "but Castle-building backwards, wherein we amuse ourselves with the fortunes and adventures of other persons as if they were our own?"² This exercise of imagination, though common, is productive or creative, and, under due artistic restraint, becomes the work of genius. From this point, Arbuckle starts upon the few hints he gives of his views upon Aesthetics, as such. These are very scattered and tend rather in the direction of literary and artistic criticism than towards the construction of a theory of Art.

The influence of the artistic imagination upon life and conduct is more important. Arbuckle appears to have given Imagination the power of outlining an Ideal of the beautiful life, for which each separate act constitutes the material to be worked up—as it were, the pigments to be successively applied to make the complete "picture".

The application of the productive or artistic imagination to Ethics has an important bearing upon the Psychological character of Arbuckle's theory. While he strongly contends that the basis of the delight in Beauty is "natural," i.e., not wholly the result of education, his theory is more complex than that of Shaftesbury and Hutcheson. The delight derived from Beauty can scarcely be said to be ultimate in as much as it is conditioned by the artistic idea of a beautiful personality, which ideal is consciously present in the mind, prior to the different actions which endeavour to realise it,

¹ *Inquiry Concerning Beauty*, § 6, x. "The internal sense is a passive power of receiving ideas of Beauty from all objects in which there is uniformity amidst variety."

² *Hibernicus's Letters*, i., p. 33.

and which must have some voice in the approving of these actions. Thus the delight resulting from each step towards the attainment of this ideal is not merely analogous to (as with Shaftesbury), but practically identical with the artist's pleasure in the progress of his work, and, while this is no doubt a joyful feeling, it is neither unanalysable nor ultimate and therefore can scarcely be described as intuitive—else every workman's satisfaction in work well done would be equally intuitive.

In the case of the proper sphere of the artistic imagination—namely, in Literature and Art—it would appear from the hints in the essay on Castle-building that the faculty works consciously, since it must be watched and its procedure kept within bounds. It is here where Arbuckle of the Shaftesbury writers comes closest to later æsthetic theories, that he misses the importance of the unconscious element in art. Nor need one blame him for lack of insight, when it is remembered that as a verse-writer he was one of the imitators of Pope, amongst whose consciously laboured efforts one looks in vain for outbursts of "fine frenzy".

Finally, with regard to the Beauties of Nature he would also have found a place for Imagination here also, since Nature not only appeals to the natural capacity for appreciating the Beautiful, but rouses the "fancy" to use it for its own purposes—certainly in Arbuckle's own treatment of Natural Beauty, as well as in his frequent use of personification, there is much that is the result of the artistic imagination.

Therefore it would appear that the psychologic order and values are something as follows: Delight arises immediately from the appreciation of Beauty: but Beauty itself (at least in the case of moral and artistic beauty) is the result of the natural capacity for perceiving beauty modified by the artistic imagination and its ideals, and this again is influenced by memory, hope and the effects of education and training.¹ Thus in all cases of joy in the beautiful life, the natural capacity is modified by external training and also by internal faculties. It is to this that life and conduct are presented as an artistic product, the creation of a personality, which, like the "disappearing gun," sinks momentarily out of sight, and then the resulting pleasure partakes of the character of artistic *disinterestedness*.²

¹ *Hibernicus's Letters*, ii., p. 324.

² Thus Arbuckle's Beauty would have three characteristics of Kant's "Judgments of Taste"—Universality, Necessity and Disinterestedness.

THE MODIFICATION OF AESTHETIC ETHICS IN RELATION TO
THE THEORY OF GOVERNMENT AND POLITICAL ECONOMY.

Arbuckle's aesthetic morals scarcely bear the strain of the explanation of every-day problems ; and yet he is above all things a practical writer. Consequently, when he faces the theory of government and economics, he falls back upon Shaftesbury's Benevolence, which he interprets, as Hutcheson did—though not by the same formula—as “the greatest happiness of the greatest number”. With regard to the theory of the State, Arbuckle was a thorough Whig, and he endeavours to show the eudæmonistic results attending the recognition of the liberty of the subject ; indeed, he devotes considerable space to arguments in favour of its extension.

As in Moral Philosophy, so in relation to Political Economy, Arbuckle's position is of interest, through extrinsic circumstances. The French Physiocrats have claimed Adam Smith as a disciple, yet it can be shown that Smith received the impetus that resulted in the *Wealth of Nations* from Hutcheson at Glasgow.¹ Now the earliest work of Hutcheson's that contained economical matter was the *System of Moral Philosophy*, which was probably written between 1733 and 1737, though it was not published until 1755. When the close relationship of Hutcheson and Arbuckle at Dublin is remembered, the isolated expressions of the latter upon economical questions, published as early as 1725 (just thirty years before Hutcheson's *System*) in the *Dublin Journal*, are worthy of mention.

It will be remembered that Molesworth—Arbuckle's patron—had been a minister at the Danish Court, and therefore it is not surprising that, in Political Economy, Arbuckle should follow Sir William Temple, who had discharged similar duties in Holland. Like Temple, Arbuckle is an adherent of the mercantile system, though to a less extent, for he had the important advantage of being able to see both sides of the balance of exports and imports through his residence in Ireland, which, he says, is to be looked upon “as a colony of England”.² Therefore, from the mercantile point of view, he has to show how the balance of trade is to be in favour of Ireland, without prejudice to the prosperity of England. But, while the balance of trade is to consist either of specie, “or what will turn to it in the

¹ Cf. *Life of Adam Smith*, by John Rae, p. 15.

² *Hibernicus's Letters*, i., p. 297.

long run," Arbuckle is very far from following the mercantile theorists, either in advocating prohibition or bounties. Considering the date at which he wrote, he speaks with no uncertain voice in favour of Free Trade, contending that "Prohibitions, or high duties amounting to prohibitions, we daily see have no effect".¹ They lead to extensive smuggling and "the exorbitant gains to be made in such cases work too powerfully upon weak and dishonest minds to hinder them from supplying our luxury at any hazard to themselves and to the ruin of the public". Even bounties "have not fully answered the ends proposed". Thus, Arbuckle, while clinging to the mercantile position regarding bullion as wealth, and the consequent fallacy of the balance of trade, is an advocate of Free Trade—at least between England and Ireland. The reconciliation of these two opposing tendencies in his work comes from a combination of the opinions of Swift and Shaftesbury. From the former he learnt to advocate the home-consumption of home manufactures, but he advances beyond what might be called the patriotic Protection of Swift by an ethical principle borrowed from Shaftesbury's optimism. He supposes, without expressly stating it, that most of the goods required in Ireland can, under *natural* conditions, be produced inside the country, and, even under certain circumstances, such production would leave a surplus, which could be profitably exported, and, further, most manufactures can be sold to us more cheaply by the local producer. To bring about a return to such "natural" conditions only requires a recognition of "enlightened self-interest" as opposed to fashionable caprice. Such arguments are strengthened by purely ethical ones, such as appeals to Benevolence and the amount of happiness which would be produced by the increased amount of labour employed. This, according to Arbuckle, is the only true charity.

These views are of interest from two quite different points of view. On the one side, Arbuckle's tentative economical work constitutes a connecting link between the Mercantile School and the Physiocrats, while it is important to note that so long before the publication of the *Wealth of Nations* he initiates the postulate of the coincidence of the individual and general good, as a consequence of "a beneficent natural order"²—a doctrine commencing in modern thought with Shaftesbury, and transmitted by Molesworth

¹ *Hibernicus's Letters*, p. 303.

² Cf. *A History of Political Economy*, by J. K. Ingram, p. 91.

to Arbuckle and Hutcheson, while from the latter it found its way into the system of Adam Smith. When the popularity of Shaftesbury in France is remembered, it is easy to see how the same principle results in the conclusions of the Physiocrats, under different commercial conditions. In the second place, it is to be noticed that the help Arbuckle receives from Shaftesbury's principle of Benevolence in dealing with the practical needs of his time impairs the consistency of his *Aesthetic Ethics*. Theoretically, Virtue is the Beautiful life: whereas, in dealing with government and economics, Beauty disappears, and the conclusions are deduced from Shaftesbury's Benevolence.

ARBUCKLE'S RELATION TO SHAFTESBURY AND HUTCHESON.

Shaftesbury's system gives a double equation for Virtue—on the one side as identical with social good, on the other with Beauty. But he fails to establish any connexion between these two synonyms for Virtue. Obviously Beauty is the wider term of the two, but, in as much as he admits that some Benevolent actions are not virtuous (and therefore not beautiful), it is also true that, in some cases, Benevolence must overlap Beauty.

Shaftesbury, like every thinker who has exerted any influence upon the course of philosophical development, had "incomplete" followers, who make apparent his concealed inconsistencies. This may even be seen in Hutcheson's first work, published in the same year (1725) as the first thirty-nine numbers of the *Letters*, in which the two subjects mentioned, Beauty and Benevolence, are isolated, and each is treated in a separate treatise. Shaftesbury himself never seems to have decided whether to make Virtue Beauty or Benevolence; and we find Hutcheson, in his early works, developing the Benevolent aspect, by maintaining that Virtue was Benevolence, and that anything not benevolent is not virtuous.¹ While Arbuckle represents the opposite tendency, holding that Virtue is fundamentally of the same nature as the Beautiful in Art: but, precisely as with Hutcheson, Beauty is isolated from Benevolence, and the latter is reintroduced to explain practical needs.

With both Shaftesbury and Hutcheson, what is called Beauty is rather rational symmetry—to make it aesthetic Beauty or Beauty proper, it wants action or movement and colour, upon which Arbuckle insists. It is thus that we find Hutcheson speaking of the "beauty of theorems," and

¹ *Inquiry Concerning Moral Good and Evil*, § 3.

even, in the first edition of his *Inquiry*, introducing "mathematical calculation" in Ethics, by formulating different ethical states as equations, e.g., the "moment of evil" is $\mu = H \times A$. Where H = Hatred and A the ability of the agent;¹ thereby showing the special and mathematical meaning he gives to Beauty. Therefore, Arbuckle advances upon both Shaftesbury and Hutcheson in so far as he opens a way to a theory of *Æsthetics*, as such. While he thus advances both upon his master and fellow-disciple, he does not follow his own thought far enough to reach its due reward in anticipating Schiller's æsthetic morals. The plastic Imagination—Arbuckle's "fancy"—hints at the free "play" of artistic and æsthetic activity in which Schiller finds the reconciliation of Kant's duality of sensibility and reason.

Upon the other hand, Arbuckle loses, by the special interpretation of Shaftesbury, all the fruitful germs implied in that side of Shaftesbury's theory which vindicates the right of the Moral Sense to approve of men's tempers and characters, or, in other words, the *inner* side of action. Arbuckle's æsthetic procedure tends more and more to de-personalise action—which, at first, the creative product of a conscious personality, is afterwards projected outward and viewed "as a picture,"—in fact the agent, as far as possible, turns his back upon his own act, and, as it were, trying to forget it is his own, looks upon its *outward* side and meets it as a stranger.

This train of thought suggests at once a contrast and a parallel to the "Impartial Spectator" of Adam Smith, which the agent temporally projects from himself by putting away from himself his own reason and sympathy and retaining *his act*—with Arbuckle, on the contrary, we have an artistic externalisation of the act, while the rest of the personality is retained as before. The divergent methods of both find a unity in an unconscious groping after the rigour of Kant's Categorical Imperative—in Smith's case, by the disinterestedness of the Impartial Spectator; in Arbuckle's by a disinterestedness which is that of the *Æsthetic Judgment*.

Regarding Arbuckle's relation to Hutcheson, it will already have been seen that Arbuckle's work is the natural complement of Hutcheson's early investigations. Though Hutcheson had much to do with the foundation of the study of

¹ *Inquiry*. First edition, p. 173. It has not been noticed that a similar "moral algebra" occurs in the *Treatise on the Passions* (1728), e.g., $L = C \times G$ (p. 304).

Æsthetics, it is strange how far he was from appreciating the essentials of Art; and even Literature seems to have appealed to him from its linguistic and Philological sides rather than the artistic. It is a strange irony of Philosophy, that Berkeley, whose letters from Italy teem with appreciative references to painting and sculpture, degrades Beauty to the merest utility,¹ while Hutcheson, one of the earliest æsthetical writers, fails to show any deep understanding or sympathy with the Beauty of Art. Little as Arbuckle has written, his isolated expressions show us brief transient glimpses of his entrance into the spirit of Poetry and Art, which would have qualified him to do valuable work had he not deserted Philosophy. As it is, he leaves us a young man's fragment, and when one remembers that the unpromising title of *Sermons* has excluded Butler's ethical work from the majority of the histories of Philosophy, until quite recently, it is little wonder that theories disguised under the title of *Hibernicus's Letters* should have been hitherto unrecognised as containing a missing link of the chain of the British historical development of thought.

¹ *Alciphron*, Dia. 3, § 9. Hutcheson, Addendum to fourth edition of *Inquiry*.

V.—TIME AS RELATED TO CAUSALITY AND TO SPACE.

BY MARY WHITON CALKINS.

I.—THE PHENOMENAL CATEGORY OF NECESSARY CONNEXION.

Two fundamental errors, one positive and one negative, still contribute to a radical misunderstanding of the nature of time. Metaphysicians insist, as they have insisted for centuries, on treating Time and Space as analogous, and on attributing to the one the characteristics of the other; and, with the same persistence, they overlook the fundamental and far-reaching likeness between Time and Causality.

This paper aims to suggest the proper relations of time to causality and to space, and their common reference to a more ultimate category. Everybody will agree that all three may be regarded as varying sorts of unification of different kinds of multiplicity; causality as a connexion of events, time as a series of moments, and space as a relation of points or positions. This unity is, however, phenomenal, not ultimate; a connexion of facts,¹ that is of relatively separate, artificially isolated portions of reality—qualities, things, events or moments—‘accepted’ without investigation. This relative separateness and independence, which is an essential characteristic of the phenomenon, makes it a convenient object of scientific observation and classification, but debars it from the claim to ultimate reality, on any monistic hypothesis of an absolute unity underlying all multiplicity. To the idealist, for instance, to whom the universe is fundamentally the vital unity of individual selves within an absolute self, the temporal, spatial or causal relation of phenomena is through and through mechanical, superficial rather than essential; a connexion, relatively extrinsic, of isolated bits of reality regarded as relatively independent.

¹ Cf. Bradley's definition of facts, *Appearance and Reality*, p. 317. “Any part of a temporal series . . . can be called an event or fact, for it is taken as a piece. . . .”

Yet however he denies its ultimateness, however strenuously he claims the existence of a deeper unity, monist as well as pluralist acknowledges the subordinate categories of phenomenal reality, that is the unifications of the superficial facts of experience.

Of these forms of what is at least phenomenal unity, two may be clearly distinguished: identity, that is the unity of the 'thing' or 'quality' with itself, in spite of the multiplicity of its temporal moments; and necessary connexion or the unity of the many with each other, that is, the relation, direct or indirect, of every bit of reality with every other, just by virtue of their both forming part of the same world. Such a reduction of the principles of phenomenal unity is suggested to the careful student by an elimination of categories from Kant's elaborate table: for the categories of Quality turn out to be attributes of sense elements, and not in any true sense functions of unity; those of Quantity prove their practical identity with time and space; and the categories of Modality are admitted by Kant himself to stand on quite another footing from the others—being virtually, indeed, mere varying expressions of his insistence upon the greater reality of the sensuous. The true functions of unity are evidently, then, to be sought under the head of 'Relation'; and there, we find, Kant recognises substance or permanence (a modification of identity), Causality or the necessary connexion of the Successive, and Reciprocal Determination, or the necessary connexions of the simultaneous. So Schopenhauer, whose metaphysical doctrine has failed, unhappily, of its rightful influence, because overshadowed by his ethical system,—Schopenhauer, though he overlooks permanence and identity, reduces the categories to one, that of necessary connexion, or, as he names it, *Grund*, of which time, space and causality are subordinate forms. "Alle unsere Vorstellungen," he says, "stehen unter einander in einer gesetzmässigen Verbindung, vermöge welcher nichts für sich Bestehendes und Unabhängiges, auch nichts Einzelnes und Abgerissenes Objekt für uns werden kann. Diese Verbindung ist es, welche der Satz vom Zureichenden Grunde ausdrückt."¹

To discuss both sorts of phenomenal unity would lead us too far afield. We are more concerned with this last named, so clearly described by Schopenhauer; the necessary relation of all the diverse facts of the universe to each other, a principle of unity manifested in many ways, by the com-

¹ *Vierfache Wurzel des Satzes vom Zureichenden Grunde*, § 16.

bination of qualities in a thing, by the coalescing of feelings in a mood, by the grouping of mathematical quantities in a series, or by the rhythm which binds together notes in a scale. The thesis of this paper is the assertion that Time and Causality are subordinate forms of this principle of the Necessary Connexion of phenomena, and that the third and co-ordinate form of the category is Reciprocal Determination, not, as is often stated, Space.

II.—TIME.

(a) *The Temporal Manifold.*

The reduction of these categories to the one fundamental principle of necessary connexion is best justified by a more detailed consideration of each one of them, and an investigation of the nature of time becomes therefore our immediate problem. To the question, What is time? the traditional answer is from the outset unsatisfactory, for it enumerates two distinct attributes of time, duration and succession, without giving an inkling of their relation to each other. But at the first glance, these so-called time-relations reveal themselves as directly opposed; the first is a form of unity, the second a kind of multiplicity; and yet duration is in no sense the unity of the successive, but quite a different sort of unity; it is a form of identity which consists in the oneness of one phenomenon with itself rather than that of many phenomena with each other. Duration, or permanence, is identity, regarded in direct comparison with succession and, in fact, measured by succession.¹

Now if we are to choose between succession and duration as expressions of the real nature of time, there cannot well be any doubt of the decision. Things endure, qualities persist, one experience outlasts several others, but the essence of time is its restlessness, and the nature of time is the multiplicity, the succession, of its moments. The temporal sequence of course implies an enduring permanence, and is known only by contrast with it, but the succession, not the duration, is truly temporal. Everyday reflexion has always, indeed, identified time with succession, and has sharply emphasised its opposition to duration or permanence; the "flight of time," the elusiveness of the moment, the stream

¹ Cf. Schopenhauer, *Welt als Wille und Vorstellung*, § 4, p. 11 (8te Auflage): "Das Zugleichsein vieler Zustände aber macht das Wesen der Wirklichkeit aus, denn durch dasselbe wird allererst die Dauer möglich, indem diese nur erkennbar ist an dem Wechsel der mit dem Dauernden zugleich Vorhandenen".

of time, are all expressions of our ordinary consciousness. Nor is there wanting the sanction, sometimes perhaps unwitting, of the great masters in philosophy. "Die Succession," says Schopenhauer,¹ "ist das ganze Wesen der Zeit." "Time in its first appearance," Hume declares,² "can never be severed from such a succession of changeable objects." "Time is nothing," is Berkeley's expression,³ "abstracted from the succession of ideas." The theory is sometimes upheld, even by Kant, though his usual view is that succession is merely one of the modes of time,⁴ while occasionally he makes the misleading statement that permanence is the substratum of time, or even identical with time, of which accordingly succession is denied.⁵ Before the appearance, however, of the second edition of the *Kritik*, Kant had realised the inaccuracy of such statements, and a manuscript note in his own hand makes the comment: "Hier muss der Beweis so geführt werden dass er nur auf Substanzen als Phenomena äusserer Sinne passe, folglich aus dem Raum".⁶ The suggested correction does not, however, appear in the second edition text of the Analogy, which, on the other hand, even adds the unequivocal sentence, "Die Zeit . . . bleibt und wechselt nicht". But in a new section, introduced in the second edition—the *Allgemeine Anmerkung zum System der Grundsätze*—Kant says definitely, "Der Raum allein bestimmt beharrlich, die Zeit aber, mithin alles was im inneren Sinn ist fliest beständig".⁷

¹ Schopenhauer, *Welt als Wille, u.s.w.*, i., § 4, p. 9.

² *Treatise*, book i., pt. ii., § 8, Green & Grose, ed. i., p. 343.

³ *Principles of Human Knowledge*, § 98.

⁴ "Die drei Modi der Zeit sind Beharrlichkeit, Folge und Zugleichsein." *Kritik der reinen Vernunft*, editions A., p. 177; B., p. 219.

⁵ *Op. cit.* A., p. 183, B., p. 226. "Die Beharrlichkeit drückt überhaupt die Zeit aus. Denn der Wechsel trifft die Zeit selbst nicht, sondern nur die Erscheinungen in der Zeit."

⁶ *Nachträge*, lxxx.

⁷ The truth is that there is hardly any part of Kant's teachings so full of verbal inconsistencies as his doctrine of time. The constant juxtaposition, in successive paragraphs and even sentences, of glaring contradictions like those which have been quoted, amply justifies the critical theory of the *Kritik*, as written bit by bit and carelessly put together. At least three positions are assumed: (1) the theory that time is fundamentally "the permanent," and thus the substratum of succession and co-existence; (2) the theory that permanence is one of the *modi*, attributes or dimensions of time; (3) the theory which contradicts the permanence of time, as in the words, "Das Zugleichsein [ist] nicht ein Modus der Zeit, in welcher keine Theile zugleich sondern alle nach einander sind". Cf. *Reflexionen*, pp. 366, 368 and 373.

The tendency to foist permanence upon the restless nature of time is clearly the result of the misleading habit of making time analogous with space. We of modern times owe much of this misunderstanding to Newton's *Principia*, and one can hardly read the Scholia of Proposition VIII. without realising that this "time absolute, true and mathematical" which "flows regularly (*aequaliter fluit*)" and which is nevertheless credited with duration, that is with permanence, is but the pale abstraction from absolute space which "ever remains like and immovable (*semper manet similare et immobile*)". In the same way, the sections on Time in the *Kritik* owe their obvious weakness to the failure inevitably attending every effort to treat spatial and temporal reality after the same fashion.

If now succession is admitted to constitute the nature of the temporal manifold, it must next be distinguished from other sorts of multiplicity by its characteristic irrevocability. The moment never returns, the past is gone beyond recall, the present is always a new phenomenon. More closely studied the 'irrevocable event or moment' differs from the 'revivable' thing, in that its manifold lacks the identity which belongs to the latter. The 'moment' is precisely such a phenomenon as has no permanence and will not recur, while the 'position in space' has an identity and thus a permanence and unchangeableness, such that it may be observed again and again. It is for this reason that Kant, as has been shown, in his later discussion treats permanence as a spatial relation, while Schopenhauer repeatedly emphasises¹ the "starre, unveränderliche Beharren des Raums". It will be necessary, later, to widen a little this distinction between irrevocable and revivable, so as to include within the latter class mathematical and musical, as well as spatial, series. At this point of our study we have to differentiate the abstract from the concrete succession, that is, moments from events. The distinction is psychologically an abstraction, since we are never conscious of empty time, but always of past, present and future events, but the abstraction is a justifiable one, and we do mean always, by 'the moment,' the relatively empty unit of a successive manifold, the event in which the object of our attention is not any part of the specific content—colour or sound or emotional tinge—but just the bare fact of its being one of an unrecurrent series.

¹ *Welt als Wille, u.s.w.*, i., § 4, p. 11.

(b) *The Temporal Unity.*

Up to this point the temporal manifold has been the topic of discussion. But time means more than bare multiplicity, and its moments are regarded not only as many but as unified or connected. This connexion is moreover considered to be 'universal,' that is it is predicated of every possible phenomenon, so that the separateness of the phenomenon is only relative, and just by virtue of being 'event' or 'thing' it is by hypothesis one of a connected multiplicity. And this universality which is attributed to phenomenal connexion follows from another characteristic, its necessity. By the necessity of connexion is meant that the synthesis of the manifold depends on somewhat more fundamental than itself, that is upon the fundamental unity of reality which makes it impossible that any unconnected manifold should exist. This is the sort of necessary connexion, a phenomenal synthesis, founded upon an ultimate unity, which Kant shows by his transcendental deduction of the categories; and the establishment and explanation of this unity form Kant's real answer to Hume. Only a pluralist, therefore, can deny the necessity of phenomenal connexion, and conversely no one who affirms the universality of such a relation can consistently defend the pluralist metaphysics.

The necessary temporal unity is, moreover, of a particular sort. Geometrical magnitudes, for instance, are also of necessity connected, but the relation of one angle to another differs in one marked respect from the relation of one moment to another. The temporal series is not only connected but irreversibly connected, that is, past, present and future must be experienced in the same fixed order. One may turn one's eyes from east to west or from west to east, one may ascend or descend the musical scale, and one may count from 100 to 1 or from 1 to 100, while one cannot live the future before the present. Past, present and future must in truth be defined in terms of the irreversibility of the necessary connexion. The past is the 'irrevocable' member of a series, on which another member, the present, 'depends'—with which, that is to say, it is irreversibly connected. The present is therefore dependent on the past, and the future on the present, in a sense in which the past is not dependent on the present nor the present on the future; while, on the other hand, mathematical quantities or planets in the solar system, though in a very real sense dependent on each other, yet are mutually determined.

Thus the fundamental distinctions of time are based upon two sorts of necessity: first, the dependence of synthesis in general upon Ultimate Unity, and second, the dependence of the moment upon the preceding moment (which as 'irrevocable' is regarded as peculiarly real).

This now is the essential truth contained in all assertions of the oneness of time; not a unity of one phenomenon with itself, as opposed to multiplicity—the unity of duration—but the unity of the manifold, the related oneness of phenomena necessarily bound together. Schopenhauer states the doctrine unambiguously in his explicit teaching that time is only the "simplest of the forms" of the Law of Sufficient Reason. Schelling means the same by his expression, "Die Zeit hebt das Auseinander auf".¹ Kant also grows gradually to this view of the essential likeness of temporal with causal unity. Only the traditional blunder of co-ordinating space and time, and of assuming that what is true of one is true of the other, seems to prevent his discovering that time belongs among the categories. The permanently valuable part of his theory of time is to be found, therefore, neither in the *Aesthetik*, where the discussion of time follows the outline of the space-doctrine, nor in those passages of the *Analytik* which apply to time, in a matter-of-fact and mechanical way, all the predicates of space, but rather in the Second Analogy and in portions of the First and Third Antinomies, where time is treated as a category by being virtually identified with causality. For by the words,² "it is a formal condition of sense perception (*Wahrnehmung*) that the earlier time necessarily determine the later," Kant indicates that necessary connexion, which

the essential of causality, is also the fundamental characteristic of time.

Time, therefore, or the irreversible connexion of the irrevocable, relatively abstract manifold, is clearly a form of the category of necessary connexion, and is closely related to causality; the lighting of the fuse is no more 'necessarily connected' with the explosion, than one moment with another. The only distinction is indeed this, that the temporal manifold is made up of moments, whereas the causal manifold is that of events, but the underlying unity is the same in both cases, that of the irreversible connexion of the irrevocable.

¹ *Weltseele*, 3te Aufl., p. xxxv.

² *Op. cit.*, A., p. 199; B., p. 244.

(c) *The Psychology of the Time-Consciousness.*

This doctrine of the nature of time, like every philosophical theory, must meet the test of correspondence with admitted facts of consciousness. Now the essential of one's consciousness of time—that which cannot be lacking, if there is to be time-consciousness at all—is the awareness of more-than-one, that is of multiplicity, but of a successive multiplicity distinct from the manifold of the compound or of the extended. When this realisation of multiplicity is absent, when one is absorbed in a topic of thought, or in a circumscribed portion of one's surroundings, then one is lost to the sense of time; but when one wakes up to the fact of change, when one compares this image or object with another, then the consciousness of time reappears. The temporality of the event thus includes its attribute of being one-of-many, and though every moment always is a filled moment, nevertheless one may abstract from its colour or sound or fragrance and attend merely to its temporalness.

Thus psychological introspection verifies the metaphysical doctrine of time as an un concrete, successive manifold. The emptiness of the time-manifold suggests also an explanation of the length of uneventful periods of time; the fewer the interesting events, the greater our attention to the bare fact of multiplicity as such. Similarly, the observation that uninteresting and habitual contents of consciousness—notably breathings and muscular contractions—form the measure of time-intervals¹ is a case in which the material of consciousness, itself uninteresting, leaves the attention free to direct itself to the fact of succession. "Awareness of change" is thus, as Prof. James says, "the condition on which our perception of time's flow depends."²

But introspection reveals also that the time-consciousness is far more than the awareness of unordered multiplicity, and that rather, as Höffding states the truth in his admirable exposition,³ "inner connexion" as well as "change, transition and alternation" is an element of the time-consciousness. Of this inner connexion, psychological theory has taken little account, and for this reason modern discussions of time are peculiarly futile and inconclusive. 'Past,' 'present' and 'future' are distinctions of the moments according to

¹This is sometimes incorrectly interpreted as the observation that breathings and movements form the material of the time-consciousness.

²*Principles of Psychology*, i., p. 620.

³*Outlines of Psychology*, p. 184.

the irreversible nature of their necessary connexion, and must be misunderstood by those who fail to include the realisation of inner relation as a factor of the time-consciousness. When once, however, this truth is firmly held, then it is impossible to dispute about the primariness of either past or present as original time-datum,¹ for it has become evident that one cannot know the past at all, except as related to the present, nor the present unrelated to the past.

The true doctrine of the nature of the psychical present opposes also the theory that duration is an element of the time-consciousness—either “das elementare, nicht weiter reducirebare, Zeiterlebniss,”² or one among the elementary attributes of the time-consciousness.³ For, as these statements suggest, duration is regarded as a temporal element only when it is virtually identified with ‘the present’. But the present is a temporal moment, and is therefore to be defined as ‘one of a connected succession’ which obviously is not the meaning of ‘duration’. The awareness of permanence or duration though unquestionably a factor of consciousness is therefore not temporal at all.

This refusal to treat duration as a factor of the time-consciousness is not, of course, a denial that the elements of the consciousness of time, like all phenomena, psychical and physical, may be said to ‘have duration’. Not only temporal position but a certain appreciable persistence are involved, by definition, in the phenomenon or fact, whether elemental or concrete. But the ‘attribute duration’ belongs to the phenomenon from the realistic standpoint of the observing scientist and is not a part of the psychic content at all. The consciousness of temporal position and the consciousness of duration may be added to sensation complexes and so may form parts of psychic contents, but neither is a necessary element.⁴

¹ Cf. James, *op. cit.*, i., p. 605, where he seems to make the original time-datum the ‘past,’ while Strong, *Psychol. Review*, iii., p. 150, identifies it with the ‘present’ in the words, “The past means that which once was present; and the future that which will be present”.

² Meumann (paraphrasing Nicholls) *Wundt's Philos. Stud.*, viii., p. 503.

³ Cf. Wundt, Külpe, Titchener, Ward: also Stern, *Zeitschr. f. Psych. u. Phys.*, xiii., p. 332.

⁴ This consideration suggests a criticism upon the ordinary procedure of co-ordinating duration with quality, extent and intensity, as attribute of sensation. For duration, as has been shown, is an attribute only from a realistic and reflective point of view, whereas intensity and extent, as well as quality, are sensational in their nature.

Psychology does therefore substantiate our philosophical doctrine by indicating change and inner connexion as elements of the facts of time-consciousness. But another problem remains for psychological theory; how shall the time-consciousness be classified, as sensational or as relational, as direct or as mediate? To answer the question, there is needed, of course, a definition of 'the immediate,' and here we are at once confronted by a variety of meanings. Often the word is used as precise synonym for 'the present' (as realistic attribute of the phenomenon), and from this point of view every fact of consciousness is immediate since, as experienced, it is present. A variation of this meaning makes 'immediateness' equivalent with 'feeling of presentness,' so that immediacy is exactly that which may distinguish the sense percept from the image. Dr. Strong, adopting this use of the word, and following in the wake of every-day realism, is obviously consistent in his refusal to call the consciousness of time 'immediate,' on the ground that it includes a consciousness of past as well as of present. But on this theory of immediacy, it already involves time, and is therefore useless in describing the time-consciousness. Immediateness if it meant no more than 'present' would be a useless distinction, but, as a matter of fact, the word is ordinarily used in a wider sense. 'The immediate' is the fact of consciousness without a history—not the syllogistic conclusion which has been reached by way of ordered steps, nor the complex emotion which has passed through earlier and simpler stages, but the simple experience, the instinctive emotion, the undistinguished feeling of familiarity, or the single sensation. In their exact meaning, therefore, 'immediate' and 'direct' belong to the vocabulary of genetic, as distinguished from purely introspective psychology, for they treat the mental state from the standpoint of the reflective onlooker. On this basis, the consciousness of succession and of inner connexion are palpably 'direct,' just because they are unanalysable elements, for only a compound, whose parts may be traced back to an earlier stage or to a different combination, can be regarded from the genetic standpoint.

The immediacy of the time-consciousness is often denied, because it is said to involve what would be the presence in one moment of a succession of moments.¹ But the existence of a feeling of succession does not imply that a past feeling has revived and added itself to a present one; such a hypothesis is an illicit, associationist attempt to reduce 'feeling

¹ Cf. Strong, *op. cit.*, p. 155 seq.

of succession' to 'succession of feeling,' and is contradicted by unprejudiced observation, which inevitably finds that the 'feeling of succession' and the 'feeling of inner connexion' are unique, unanalysable minima of consciousness.

The reaction against this unjustifiable attack, from the side of metaphysics, upon the immediacy of the time-consciousness is probably responsible for the tendency to define this in terms of perception or of sensation. Wundt,¹ following Kant, speaks of *Zeitanschauung* and Külpe² of *Zeitwahrnehmung*; while references to 'time-sense' or 'time-sensation' may be found in the writings of Mach,³ of Meumann,⁴ of James⁵ and of Stern⁶ (though James speaks also of the 'perception of time,'⁷ while Meumann has lately declared for *Zeitbewusstsein*,⁸ and Stern recently proposes *Zeitauffassung*⁹). Too much emphasis must not of course be laid upon the expression 'time-sense,' whose traditional meaning is a very wide one, yet it is not out of place to remark that the complexity of the time-consciousness forbids identifying it with the sensation, which is a psychic element. The time-consciousness as we have seen, is clearly analysable into the two factors, feeling of succession and feeling of connexion, and cannot therefore itself be what Höffding calls it,¹⁰ a psychological ultimate. The percept as well as the sensation, moreover, is distinguished by a certain 'substantive' character, as James puts it, from the more 'transitive' elements of consciousness, like the feelings of identity, of familiarity and of succession. Even Hume recognises this, though he does not see how it upsets all his philosophising, and expresses it very clearly in the words:¹¹ "the idea of time arises altogether from the manner in which impressions appear to the mind, without making one of the number". The essential meaning of the teaching that the time-consciousness is immediate, or even sensational, is however retained in the conclusion that

¹ *Physiologische Psychologie*, 4th Aufl.

² *Grundriss der Psychologie*, p. 416.

³ Quoted by Stern, "Psychische Präsenzzeit," *Zeitschr. f. Psych. u. Phys.*, xiii., p. 827.

⁴ "Beiträge zur Psychologie des Zeitsinns," *Philosophische Studien*, vii. and ix.

⁵ *Principles of Psychology*, i., p. 605 seq. ⁶ *Op. cit.* ⁷ *Op. cit.*

⁸ *Philosophische Studien*, xii., p. 127.

⁹ *Theorie der Veränderungsauffassung*, pp. 3 and 10. *Psychologie der Veränderungsauffassung*, p. 21.

¹⁰ *Op. cit.*, i., p. 243.

¹¹ *Treatise*, bk. i., part ii., sec. 3, p. 343. Italics mine.

it is made up of unanalysable and immediate factors, feeling of change and feeling of connexion. These, as has been said, correspond exactly with the elements of time, metaphysically considered—with its irrevocable manifoldness and with the universal connexion of its parts, the moments.

IV.—CAUSALITY.

The definition of causality as necessary connexion of events, though it opposes at once the every-day belief that one *thing* or object may be the cause of another, is nevertheless in accord with all philosophic thinking since Hume's time at least. Not the match, but the lighting of the match, causes the fire; not the bell, but the motion of its tongue, causes the sound. Another common theory demands notice; the doctrine that causality is a category of merely physical events, not a relation of phenomena of consciousness, feelings and volitions, percepts and images. On this view causality is distinguished from temporal unity, not only by its concreteness, but by the externality of the phenomena which it unites; it is therefore an external, as opposed to time, an internal category. There is no lack of support for this doctrine. Kant's definite argument against Hume, by his distinction between objective and subjective causality, rests upon the assumption that causality is a relation of the external. Schopenhauer says distinctly¹ that causality is "der Regulator der Veränderungen der äusseren Erfahrung," and indeed he makes matter synonymous with causality: "Ihr Wesen besteht in der Kausalität".² Modern thinkers, finally, very generally hold that the only categories of the inner life are those of worth or value, and that causality is a physical principle.

Now it is undoubtedly true that causality is a more important category of the outer than of the inner life, for every natural science supplements observation of facts by investigation of their causal connexion, and only physical causality is capable of exact description and measurement. But these truths prove only that causality is a particularly

¹ *Vierfache Wurzel, u.s.w.*, § 20.

² *Welt als Wille, u.s.w.*, i., p. 10; cf. i., p. 13, "Materie oder Kausalität, denn beide sind Eines". A slight modification of this doctrine is the definition of matter as "objektiv gewordene Kausalität," and this again is expanded into the theory that matter is simultaneity, a combination of space and time, or "die Wahrnehmbarkeit von Zeit und Raum". Throughout, Schopenhauer's insistence upon the externality of causation is clear.

important and fruitful category of the external world, and not an especially emphasised category of the inner life; they do not in the least disprove that the causal is a possible way of regarding the psychical experience.¹ On the other hand, in so far as the psychical experience is viewed—as unquestionably it may artificially be viewed—as made up of a series of single states—in so far it must be subject not merely to categories of significance, but to phenomenal categories, including those of universal connexion. This view is strengthened by the ordinary doctrine that time is a category of the inner life, and it cannot be disproved by the assertion, even if substantiated, that we actually come to the conception of internal causality through the previous observation of physical causation. So long as mental facts *may* be regarded as necessarily connected, each with each, so long causality is a psychical as well as a physical category. Therefore a hypothetical solitary individual, without consciousness of other finite selves, and hence without consciousness of externality, might think of his consciousness as made up of isolated and independent units. These units would have gained their permanence, probably, through repetition; the necessary connexion would have been suggested by repeated experiences in the same order.

With physical causality, however, that is, with the application of this conception of necessary connexion to events regarded as common experience of all possible subjects, one enters the sphere of the universal and the describable, and there is introduced at once the possibility of verification through experiences which are readily repeated, imitated and communicated. Through such verification the empirical causal propositions arise, the assertions that such and such an event has such and such a cause. This is the sort of doctrine of causality which Hume's criticism really touches, and he is quite correct, of course, in his conclusion that necessity never can be predicated of any observed connexion, and that the persuasion of empirical necessity is an effect of habit. But the assertion of this or that cause has no relation to that fundamental universality of causal connexion expressed in the proposition: "Every event has a

¹ Cf. Hume, who, though he usually treats causality as connexion of outer events with each other (or of psychic facts with the 'real objects' which he inconsistently assumes), nevertheless, says distinctly (*Treatise*, bk. i., pt. iii., § 2, end) that the ideas of cause and effect are "derived from the impressions of reflexion, as well as from those of sensation. Passions are connected with one another . . . no less than external bodies are connected together."

cause". For causality is fundamentally, as has been seen, not the connexion of this or that event with another, but the necessary, and therefore universal and irreversible connexion of every event with some other event, its cause. The temporal connexion, that is the necessary relation of one moment with another, has really, therefore, by virtue of its abstraction from the concrete a complete universality which is lacking to any concrete connexion. The irreversibility of causal synthesis implies, further, another sort of necessity, an unequal relation between cause and effect. The member of a reversible series is equally dependent on every other member of the series, while any term of a succession is specifically dependent on what precedes. This relation of the phenomenal cause to its effect is really what is meant by the 'power' of such a cause.

Still another principle has to be distinguished from the axiom of causality, namely, the proposition : "The same cause always has the same effect". Evidently this principle is of far-reaching use and application in empirical science, forming the basis of all reasoning about the unrecorded past and the untried future, but it is not at all a purely causal principle, since it involves a recognition of identity in the assumption that 'the same cause' will recur, and since identity really is, as has been suggested, a transcendence of the whole standpoint of fact-multiplicity, not a unity 'of the manifold,' but rather a unity 'in spite of multiplicity'.

V.—RECIPROCAL DETERMINATION.

To discuss in detail the unity, reciprocal determination, of the revivable manifold would have led far beyond the limits of a self-respecting philosophical essay. The terms of the relation, concrete things and qualities, and abstract mathematical elements, differ, as has been shown, from events and from moments, by the fact that each possesses a kind of unity which these others lack, identity, and therefore permanence and recurrence. From this follows the feature which distinguishes the connexion of the revivable manifold from that of the irrevocable; a reversibility or reciprocal relation such that any one of the multiple may be taken as the starting-point.

The reciprocally determined manifold is often treated as if completely equivalent with the spatial; Kant states his third analogy of reciprocal determination, with express reference to substances as co-existing in space;¹ Schopenhauer

¹ *Op. cit.*, A., 211; B., 256.

writes,¹ "Der Raum ist durch und durch nichts anderes als die Möglichkeit der wechselseitigen Bestimmungen seiner Theile durch einander, welche Lage heisst"; and Spencer² distinguishes coexistence from succession, in that "whereas the terms of the first can be known in the reverse order with equal vividness, those of the second cannot". Yet it is at once evident that the spatial is, to say the least, not the only form of the permanent and reversible manifold; the notes in a scale and the terms of a numerical series are also reversible but not spatial, for even if one assert the spatial character of sounds, it is surely not by virtue of their space distinctions that the notes are capable of reversal. One is thrown back upon the question: What is the spatial, since, at best, it is only one among the forms of the reversible? Once more, there can be no doubt of the ordinary answer: the spatial is the external, and just as time is a category of the inner, so is space a category of the outer life. But this doctrine accords ill with the common view that not all sense-qualities, but only the visual and the tactful, are spatial. Why should not sounds and odours as well as colours and surfaces have form and location? Or, if one take one's stand with the extreme nativists, like James and Ward, and affirm the spatial character of all sense-qualities, the questions still remain: What of the mathematical reversible? is not that still independent of me and so external to me? The true nature, like the invariable test, of externality, is its superiority to the individual, that is, its universality. The outer world is the world whose lights and sounds and fragrance all men share, while the inner world of my imagination belongs to me alone; the external truth is the object of common conviction, while the illusion is the product of the individual mind; in a word, the external world is the world of society as opposed to the world of the lonely self. This impossibility of limiting the 'external' or 'reciprocally determined' to 'the spatial,' fairly drives us at length to the conclusion which psychology has long held before us, that the spatial means something quite other than the external, and is itself nothing more than a concrete: a sense-quality or a complex of sense elements.

The arguments of the Kantians against the sensuousness of the spatial are not decisive. To urge that Space is recognised as one, in a sense in which 'redness' and 'softness' are not called 'one,' is to overlook the difference between

¹ *Welt als Wille, u.s.w.*, i., p. 109.

² *Principles of Psychology*, third ed., part vi., c. 22, vol. ii., p. 275.

Space, clearly a construct of experience, and the elementary extension or spatialness from which this Total Space is built up. The other characteristic marks of the spatial clearly result from its greater generality, that is from the greater variety of its combinations with other sense experiences, for whereas the visual, like the tactful, quality, is always in our experience combined with the extended, this may be combined with either of the two. Thus, also, it is easier to abstract the spatial quality from the complex of sense-experiences, to shake it free from encumbrances, to make it the object of more constant attention. It follows naturally that space distinctions are more delicate and more complex. Finally, the certainty of the geometrical consciousness, on which is founded Kant's Transcendental Deduction of Space, is not to be explained by the ordinary assumption that space-consciousness, because different from sense, must have greater certainty, but on the ground that the spatial as a more constant object of attention is more universally apprehended.

It is interesting to observe that Kant, whose psychology is so often better than his metaphysics, possesses a truer insight into the nature of the spatial than he can force into the moulds of his philosophical preconceptions. With his distorted notion of the ultimate distinction between sense-quality and thought, he cannot include the spatial within the sense-manifold; yet he keenly realises its character of immediateness, and cannot therefore treat space as a category, a principle of thought. Therefore that anomaly, the 'Form of Sense,' the 'sensible' which has no sense-attributes, wins its permanent position in the Kantian hierarchy, because Kant could not blind himself to the sense character of space.

We are not here at all concerned with the specific controversy between nativist and empiricist. Whether the spatial is a combination of motor sense-element with visual or tactful, or whether it is itself a distinct sense-quality, matters little, so one realise what the appeal to the ordinary consciousness of everybody surely shows, that extension is 'sensible,' no less than colour or resistance. The spatial is then no fundamental category, or uniting principle, but itself one variety of the manifold to-be-categorised. This conclusion incidentally explains many of the absurdities of the theories about time. The tendency to treat the two after the same fashion has, as we have seen, long been rife in philosophy, and the efforts to make time, the category, follow the lead of extension, the sense-quality, or of Space, the notion elaborately built up from the sense-element, must

evidently result in hopeless confusion, and in wrong theories of the two.

The summary which follows includes the chief distinctions which this paper has tried to justify. Its first section has been added for the sake of completeness, though it involves the allusion to certain metaphysical principles which have not been discussed.

UNITY AND MULTIPLICITY.

- | | |
|-----------------------|-------------------------------|
| A. I. Ultimate Unity. | II. Fundamental Multiplicity. |
|-----------------------|-------------------------------|

(Variously stated in different systems.)

(a) Idealistic.

- | | |
|--------------------|---|
| The Absolute Self. | Individual Selves.
'Ideas' of the Absolute Self. |
|--------------------|---|

(b) Realistic.

- | | |
|---|--|
| 1. Matter or Force, or
2. 'Unknown Reality'. | |
|---|--|

- | | |
|-----------------------------|----------------------------------|
| B. I. The Phenomenal Unity. | II. The Phenomenal Multiplicity. |
|-----------------------------|----------------------------------|

- | | |
|--|---------------------------|
| (a) Of the many (events or things) with each other; <i>Necessary Connexion</i> . | (a) Events (and moments). |
|--|---------------------------|

- | | |
|---|-----------------------------|
| (b) Of each of the many (things) with itself: <i>Identity</i> . | (b) Things (and qualities). |
|---|-----------------------------|

The results of the closer study of the phenomenal category of necessary and universal connexion may be grouped together after a similar fashion.

Phenomenal Unity of Necessary Connexion. Terms of the Connexion.

- | | |
|------------------|-----------------|
| 1. Irreversible. | 1. Irrevocable. |
|------------------|-----------------|

- | | |
|---------------------------|-------------|
| (a) Causality (concrete). | (a) Events. |
|---------------------------|-------------|

- | | |
|----------------------|--------------|
| (b) Time (abstract). | (b) Moments. |
|----------------------|--------------|

- | | |
|-------------------------|---------------|
| 2. Reversible, that is. | 2. Revivable. |
|-------------------------|---------------|

Reciprocal Determination.

- | | |
|---------------|-----------------------|
| (a) Concrete. | (a) External Objects. |
|---------------|-----------------------|

- | | |
|---------------|------------------------------|
| (b) Abstract. | (b) Mathematical quantities. |
|---------------|------------------------------|

Such a classification may at least suggest the possibility of a simple and accurate classification of principles often confused and as often falsely distinguished.

VI.—CRITICAL NOTICES.

Lehrbuch der Psychologie. Von FRIEDRICH JODL, o.ö. Professor der Philosophie an der Universität zu Wien. Stuttgart: Cotta'sche Buchhandlung, 1896. London: Williams & Norgate. Pp. xxiv., 768.

THE world is growing a little weary of the multiplication of psychological text-books, and any new candidate for its approval must possess distinctive merits to be tolerated and very marked excellences indeed to be welcomed. The present work lays solid grounds for favour in the thoroughly systematic treatment and well-proportioned disposition of the material; in the comprehensiveness with which it surveys and the abundant learning with which it exhibits the whole field of modern normal psychology; in the equally broad and, in the main, judicious spirit shown in the discussion of critical questions; in the extensive references to the best literature, of which, besides the citations at the proper places, there is an alphabetically arranged catalogue of twenty-nine pages at the end of the volume; in the clear and vigorous style. The book is not specially dominated by any particular *Tendenz*, nor can it lay any special claim to originality; it is not a contribution to knowledge, it will probably not arouse any very lively discussion on account of new and striking views. But if the student desires to become acquainted, under the guidance of a master of exposition, with the most generally accepted body of psychological doctrine at the present time, he will go, if he is wise, to this textbook as, on the whole, the best for this purpose of all the textbooks which German scholars have provided in recent years. One feature which strikes the English reader favourably is the frequent reference to the works of English and American psychologists and the adoption of many of the special termini and conceptions which we have become familiar with in our own language, e.g., the conception of the sensation and ideation-continuum and of the extensity of sensations, Stout's definition of apperception, etc. It is impossible to classify the author as belonging to any "school," but as suggesting a direction which he does not follow, his remark may be quoted that "it is the error of all errors in psychology to suppose that mental development is constructed out of the elements discovered by analysis" (p. 177).

The book is divided into two parts, a general and a special. The first consists of three chapters, dealing respectively with the

scope and methods of psychology, the relations of soul and body, and the nature and general analysis of consciousness (pp. 1-166). Psychology is defined as "the natural science of the forms and laws of the normal movement of the phenomena of consciousness". Objection, I think, may rightly be taken to the introduction of the word "normal" in the definition, for while it is, of course, true that normal psychology constitutes the main trunk of the science, it does not constitute the entire psychological tree. The author explains the limitation by saying that psychology is related to psycho-pathology much as descriptive and topographical anatomy is related to pathological anatomy. But pathological anatomy is still a branch of anatomy, and the conception of psycho-pathology is perhaps not quite the same as that of patho-psychology. Greater difficulty confronts us in dealing with the conception "phenomena of consciousness". What are phenomena of consciousness? Are they phenomena we are conscious of? or are they the ways in which we are conscious? Will they include, as Wundt suggests, along with feelings, emotions and volitions, a book, a tree, a stone, provided only we view these latter objects in a certain way, *viz.*, as "immediate experience"? or will they include, not the "whats," but only the "hows"? Or, since it is evident that there can be no consciousness which is not a consciousness of something, will they include the relations of consciousness to its content? I find no clear answer to these questions. On the one hand, we are told that psychology reflects on the phenomena of consciousness, the forms and laws of the play of its processes, regardless of the content represented in these forms (p. 4); on the other, we find more than a fourth of the book occupied with the discussion of sensations, which no one probably would deny to be conscious contents, however else they may be regarded. Similar uncertainty prevails as to whether the process of consciousness is to be viewed anatomically as structure or physiologically as function. The whole question as to the original elements to be distinguished in the process depends on this and on the determination of what it is we are analysing in psychology. I do not particularly complain of Prof. Jodl for not having carefully discussed these questions in the form here presented; obscurity in these matters is the common failing of psychologists. It cannot be said that even yet the field of psychology has been accurately delimited, and that the conceptions in this department—content, function, process, etc.—have been scientifically fixed. But when the phenomena of consciousness are marked off from physical phenomena by the outworn categories of "inner" and "outer" (p. 4), it is time to protest, particularly when "inner" is taken to mean, not merely having reference to a subject, but "absolutely unspatial". How can the phenomena of consciousness be absolutely unspatial when, as we are told, the visual sensation contains space of three dimensions? The various methods of psychology are critically treated with

reference to the aid which each furnishes or may be expected to furnish to the development of the science. Introspection, of course, stands first, its importance being neither too meanly estimated, nor too highly. A prominent place is given among the other methods to experimental hypnotism, which is regarded as far superior to "the occasional and mostly rather monotonous observations of psycho-pathology proper" and as an important adjunct to experimental normal psychology. This estimate rests on the assumption that hypnotism enables us to bring any feeling, idea, etc., at pleasure into the centre of the conscious process and to trace its influence. The subject of hypnotism is referred to in several subsequent passages, always, however, with stern exclusion of any suggestion of mysticism. It is held, for example, that the admission of telepathy would split the very foundations of all our science and lead to a thorough revision of our fundamental conceptions (p. 125). Much aid is also expected from the study of language, but little, on the other hand, from comparative or sociological psychology. As to physiological psychology, the application of this method to the entire realm of psychological experience is held to be at present a scientific Utopia, though the ideal postulate is that we point out for every psychical phenomenon a physiological correlate, and at the same time exhibit the unbroken continuity of the causal series of the neural processes.

The hypothesis implied in this postulate is developed at length in the discussion of the following section on soul and body. The position adopted is that of a thorough-going parallelism in that form of the doctrine which declares that the two series, physiological and psychological, are "two aspects or two different modes of manifestation of one and the same process" (p. 57), "the same content expressed in two different languages" (p. 74). We are surprised to learn that this to us so familiar hypothesis has hitherto found but few friends in Germany (p. 75). Jodl rejects any application of it where the fact of consciousness is not plainly apparent. Many physiological processes have no psychical aspect.

I venture to think that this so popular double-aspect doctrine holds its position to-day by a somewhat uncertain tenure. Only the ambiguity of the facts can account for the diversity of intelligent opinion on the subject. No one probably denies that there is interdependence of some sort between the mental and the bodily series, and the most obvious reading of the facts would seem to make this interdependence mutual. That physiological process influences, *i.e.*, is a condition of the coming to pass of the psychological process, is admitted, and, apart from methodological considerations, no one probably would hesitate to accept the converse proposition that psychological process influences, in the same sense, physiological process. In common parlance, the body affects the mind and the mind affects the body. Such interdependence of process bears but a faint analogy to the dependent varia-

bility of mathematical functions, for in the former case we have to do with determinateness of events, of things that happen. But a conditioned relation of events forms the chief, if not the sole, content of the causal connexion, and it is difficult to see how, on any merely logical grounds, a causal conception, in the sense indicated, between the two terms can be denied to be possible. Cartesian dualism is, of course, not here in question, and the applicability of the ambiguous and, on a certain interpretation, palpably false, scholastic dictum, *causa æquat effectum*, is, to say the least, extremely doubtful. There remain, however, the methodological considerations derived from the principle of the conservation of energy. Prof. Jodl, indeed, regards this principle, in connexion with the law of inertia, as the most consistent and precise expression of the law of causality in natural science (p. 63), and it is on this ground that he denies that there is any causal connexion between the soul and the body (p. 76). But so understanding the causal conception, he must either give up his view of a causal connexion between the terms of the psychical process (p. 74), or else deny that psychology is a natural science. He frankly admits, as all must do, the gaps in our knowledge of the transformation of energy, especially in the nervous system, and allows that if any one chooses to fill these out by assuming that at certain points psychic forces affect the motions of the nervous substance, he cannot be absolutely refuted by facts ; but, he says, one who does this should take heed lest, in place of an imperfection in our knowledge, he substitute a contradiction in our fundamental assumptions. "For if psychic force is to act on a system of material forces, the only way it can do this is by accelerating or retarding motion ;" but how this is possible is more difficult to conceive than it is to fill out hypothetically the gaps in the physical continuity of the neural process (p. 63). This is not the place, nor is the present writer competent, to criticise in any detail the principle of the conservation of energy. It is evident, however, as Mr. Bradley has pointed out, that a distinction must be drawn between the principle as a postulate of physical science, in which sphere its utility is undisputed, and as a statement of fact concerning the whole physical universe, as which it as certainly cannot be proved. Moreover, it is obvious to any one who has followed, however superficially, the course of recent discussion, that the modern doctrine of energy, and with it the whole of the modern doctrine of matter, is still in process of being developed. If chemical theory should move along the lines suggested by Ostwald and if, under the influence of speculative physics, the molecular theory of matter, which has so long held sway, should be superseded by a theory of interchanging energies, it would be but a step to the conception of psychical energy and psychical work as correlated, under the law of conservation itself, though more universally conceived than at present, with the other natural forms of energy ; and this would lead perhaps to the

realisation of Huxley's dream of a mechanical equivalent for consciousness, just as we now have a mechanical equivalent for heat. But however this may be, it seems premature, and it is certainly useless, to attempt to bind psychological science to a particular theory of the relation of soul and body. No better proof of this could be found than that which Prof. Jodl himself furnishes. I do not refer to the frequency with which his language contradicts, if literally taken, his hypothesis ; that he explains as accommodation to popular and recognised modes of speech. Nor do I refer especially to his positive and eloquent insistence, as over against an "exaggerated naturalism" that the conscious will is "not merely a product in the world, but a factor," "a force among other forces," influencing reality and not to be eliminated from human evolution—language which can hardly be interpreted as accommodation merely, and which it is quite impossible to reconcile with the criticism of similar views on the part of Prof. James (p. 62) or with the terms of the doctrine here under discussion. I refer to the fact that Prof. Jodl nowhere makes any special use of the hypothesis either for the purposes of his psychological analysis or for the establishment of anything like a psychological law. Even he avails himself, on occasion, of the convenient hypothesis of the "psychical disposition," though carefully explaining, what is really nonsense, that the disposition "really" exists only as a physiological disposition in the structure of the nervous substance. In the end, therefore, his insistence that even the highest achievements of our conscious intelligence are—not merely correlated with, but *are*—when viewed objectively, nothing but mechanical processes of release and redistribution of nervous energy in the brain (p. 119), may either be of profound speculative significance or may merely express a pious scientific conviction ; it certainly does not serve to make the course of psychical events any the more intelligible.

The fundamental relation of consciousness is taken to be the opposition and mediation of subject and object. This is analysed into three moments, representing respectively the action from without inwards, the reaction from within outwards and an inner mediation between the two. These moments appear in the mutually implicated forms and modes of the primary psychical reaction as sensation, feeling and conation. This division is then crossed by another, having regard to the different stages of mental development. The basis of the latter is the fact that along with the flow or undulation in which the contents of consciousness arise only to disappear, there is a summation of their effects : retained in some manner as dispositions, they reappear in new forms and in their mutual influence on one another and on the primary processes give rise to the manifold modes of the developing conscious life. The division from this point of view is into primary, secondary and tertiary phenomena, corresponding somewhat to the more familiar division, presentative, representative and reflective, but not referring, as

these terms appear to do, exclusively to intellectual development. The distinction between primary and secondary cannot be scientifically defined; it can only be experienced. The term which best designates the secondary phenomenon is "Vorstellung". Anything which we have ever once been conscious of can be afterwards reproduced. "The reproduction of feelings is an indubitable fact of the mental life." Representations of feelings, however, are not feelings, nor are memories of volitions acts of will. Feelings and acts of will are primary phenomena at whatever stage of development they occur. The "tertiary" phenomena are distinguished from the secondary as fusions and condensations of primary and secondary elements to new and unique formations. In this highest class are included the phenomena of thought and of the constructive imagination. An extremely vivid impression of the extraordinarily complicated life which psychology undertakes to exploit is conveyed by the thirty odd pages or so devoted to the elucidation of these distinctions and to the exhibition of the rich interdependence of the elements and processes as they present themselves in the diverse stages of mental development.

The divisions thus drawn suggest the scheme for the distribution of the material in the second "special" part. Two chapters on sensation and sensations are followed by two on the affective and volitional phenomena of the primary stage, and these by two on the secondary phenomena of reproduction and on the most important products of the reproductive process, time, space and the distinction between the ego and its states and the external world of objects; then comes a chapter on language and thought, followed by two concluding chapters treating respectively of the feelings and of the volitional phenomena of the secondary and tertiary stages.

The chapters on sensation and sensations, filling more than 200 pages, bear witness to the relatively advanced state of our knowledge in this department, of which they afford an admirably clear and an unusually complete conspectus, combined with a judicious handling of the most interesting and important matters of controversy. Original investigators may find ground for complaint in the omission of this topic or that which they may deem important and in the failure to notice some latest monograph; the impartial critic will rather praise the author's learning, the rare good judgment shown in the selection of the matters most essential and the masterly manner of presentation. The general student will nowhere find the mass of material which in this department has been so rapidly accumulating in recent years better disposed to his service. It is unnecessary, nor is there here space, to go into details; I will only refer especially to two points, and first, to the excellent discussion of psychophysical measurements. The technical questions concerning the methods of investigation, of fundamental interest for the experimentalist, are, to be sure, not entered upon; the author contents himself with a more summary exhibition of aims,

methods and results. On the other hand, the questions of principle are very carefully treated with critically cautious appreciation of the conflicting opinions. No final conclusion is reached, but incidentally there is some effective criticism of the view which denies the possibility of any measurement of the intensities of sensations on the ground that sensations are not multiples, as also of Wundt's interpretation of the psychophysical law as merely a special case of the law of the relativity of apperception. The other point is the acceptance of "extensity" as a characteristic of sensations and the vigorous advocacy, in the elaborate treatment of the visual sensations, of the essentially intuitive character of our space perceptions as against those who regard them as an association or fusion of optical with other sensations, or as a product of the mingling of sensations proper with unconscious inference. The third dimension is included with the others in the original *sensatum*. Indeed, the author goes so far as to assert that our most primitive visual sensations are spatially arranged (*räumlich geordnet*, p. 553) and that we have a sensation of our eye as the point to which all the perspective lines and surfaces that run out into the third dimension from the place we happen to be in converge (p. 341). These statements could hardly be supported by facts, nor are they demanded by the exigencies of theory. The original extensity of the visual sensations should be by all analogy a latent or merged plurality out of which the space relations proper are developed on the basis of many co-operating experiences, not tri-dimensional space, as such. The implication of the third dimension in the primitive visual sensation is argued for, however, as a matter of principle, on the ground of the original opposition in consciousness of subject and object, and the original excentric projection of sensations: functions, it is claimed, which cannot be learned, though they may be perfected and developed. If now, it is argued, the optical impression is necessarily externalised, then there can never possibly be any moment when the ego and the visual surface so to say coincide, and a reference to depth, however imperfect, must lie in our most primitive optical experience. This law of excentric projection is referred to again in the chapter on the ego and the external world as a refutation, on psychological grounds, of subjective idealism. But if, as is also claimed, these functions are the result of a long process of evolution adapting inner to outer relations, then again, on the general analogy of ontogenetic development, we should expect that the human infant would go through a process, though, to be sure, a relatively rapid process of acquiring them, and in that case doubt would be thrown on the original experience, whatever analysis may detect in that which comes later. But into this later experience enter the residua of past processes, and in regard to the excentric projection of sensations especially, whether interpreted as externalisation or as bodily localisation, there is good reason for believing that, however the disposition may be preformed in the inherited constitution, its

actual development demands a good deal of assistance from individual experiences of the most manifold character. So that in the end we might even admit a primitive but undifferentiated voluminousness in the optical sensations, and yet hold that all consciousness of spatial differences, and particularly the excentric projection of sensations, was a function of other contents gradually assimilating to themselves the visual sensations and not primitive at all.

The affective phenomena are treated as at the primary stage sense-feelings and elementary æsthetic feelings; at the second and third stages there is a classificatory division into formal and personal feelings, a section on the dynamics of the secondary feelings and a further section on the complex æsthetic and ethical feelings. The fundamental feeling elements at all stages are said to be the two opposed qualities of pleasure and pain; complications of these with other elements in various modes make up the concrete life of the feelings. Pleasures and pains differ respectively only in intensity; qualitative differences are derived from the elements which they accompany. The real reason assigned for distinguishing the feeling elements from the sensations is that the former can never in any way be made objective. Just how this statement is to be reconciled with the doctrine referred to above, that feelings can be remembered, is not made clear. A distinction is drawn between *Gefühlsvorstellung* and *Vorstellungsgefühl*; but in the memory of a feeling either the feeling is actually reproduced, in which case it is by definition a *Vorstellungsgefühl*, or it is not, in which case it is not easy to see how it can be represented. Strange to say, the author makes no distinction between *Unlust* and *Schmerz*, regarding even cutaneous pain as a purely affective phenomenon and not considering the many reasons for the opposite view. The law of feeling is deduced from a consideration of the relation of stimulus to capacity: there exists for each sensitive organ and for the organism as a whole a condition of equilibrium relative to the incoming stimuli, and this equilibrium is of such a sort that any departure from the mean whether towards the plus or towards the minus of intensity and extensity of stimulus, is felt as disagreeable, while a return towards the mean is felt as agreeable. Neither the view of Wundt nor that of Horwicz regarding the relation of the threshold of sensation to the threshold of feeling agrees with the facts. In the section on the dynamics of the secondary feelings, there is a criticism of the James-Lange theory which is singularly ineffective. Its ineffectiveness results from the failure to make any attempt to exhibit the structure of the emotional process as a whole or to grasp the unity of its function. It amounts practically merely to saying that the "Affect" is not the reflex in consciousness of the bodily resonance because it is a certain state of intensive feeling accompanied by these bodily reflexes. The real questions, of course, are, into what besides sensations, ideas and feelings of pleasure and pain can the emotional state be analysed, and what explanation, apart from that of an instinctive reaction, can be given

of the relation which, in this state, these elements bear to each other. The essence of the "physiological" theory is to find no elements in the analysis but those mentioned, and no explanation of their combination but the instinctive reaction on whatever may serve as the stimulus. So understood the theory loses much of its paradoxical character; unfortunately, though referring to James' later statement, Prof. Jodl seems only acquainted with the earlier and cruder formulation and not to have followed closely the later course of the discussion. The best part of the treatment of the affective phenomena, and one of the best parts of the book, is that which deals with the aesthetic feelings. There is nothing striking or original in the views presented; they are those probably the most widely current, or at least the best accredited; but the lines are drawn with clearness and precision and the whole discussion is itself a work of art calculated to produce as much conviction as pleasure.

Perhaps the least satisfactory part of the book is that which treats of the will. There are a good many psychologists to-day who deny that will is an elementary process in consciousness at all, and it would have been well, no doubt, if their views had received more careful consideration, particularly as they can fasten on the admission that to a more exact observation conation appears as a sum of minute motor impulses, which they can then plausibly proceed to resolve into a sum of actual or reproduced motor or other sensations. I think myself that a sufficient answer to this objection is to say that the phenomena are here viewed from the point of view of function, that the attitude expressed in conation is unique, and that it is elementary in so far as it seems to be a necessary aspect of all conscious process regarded as not merely passive, but as reactive, adaptive and spontaneous. All this is implied, I think, in what is here said of it. But the analysis of a function consists in the enumeration of all the conditions of its exercise, just as the analysis of the causal relation consists in the enumeration of all the circumstances essential to the event; and I do not find that the analysis here given shows sufficient appreciation of the complexity of the problem. There is no adequate discrimination of the different types of function that are referred to under the term "will," nor is there any clear exhibition of the continuity in the development of volition or of its connexion with the developing content of self-consciousness. For anything that is expressly stated, self-consciousness might not be implicated in the process at all. In the discussion of the higher forms of volition, the emphasis, one might almost say the sole emphasis, is laid on the motivation of the will in feeling. This is, of course, in general, correct; unless the object thought made some appeal to action, it is impossible to see how it could ever become acted on. But in what lies this appeal, the felt value which moves the will? Ultimately, we are told, in qualities of pleasure and pain, and as these qualities have only intensive value, the sole measure

of value in motivation is quantitative. We are thus in all cases of conflict of motive thrown back on the hedonic calculus (p. 726). This theory of value seems to me utterly false to the facts, and I cannot but think that if will had been treated as a function of the developing self-consciousness, the result would have been different. For it would then have appeared, I believe, that at no period of the development can we separate the function from the content apperceived and felt as a whole, and that, as we progressively advance from actions involving the brute sanction of impulse to those in which the sanction of desire is prominent, and thence to actions implicating the moral consciousness, we do find in the contents themselves new elements of value, felt as such, which in the end completely overshadow in importance as springs of action the mere feelings of pleasure and pain.

One or two errors may be noted for correction in a second edition: 16,000 as the lower limit of audible vibrations, pp. 184 and 357 (correctly given p. 299); E. A. Weber p. 244; the statement p. 131 that the English word "sentiment" corresponds to the "Gefühlston" of the Herbartians. The value of the book would furthermore be greatly enhanced by a proper index.

H. N. GARDINER.

Les Éléments du Caractère et leurs Lois de Combinaison. Par PAULIN MALAPERT. Paris: Félix Alcan, 1897. Pp. xvi., 302.

I THINK that those who compare this important work with the recent French attempts that have preceded it in the same subject, will allow that it marks a considerable advance. It combines much that was valuable in these attempts, escapes some of their premature generalisations, and shows a more cautious attitude than they always exhibited. It has had the great advantage of following and not preceding them. And it was natural that they, pioneers in a new and most complicated subject, should not all at once succeed in raising it from the bed of popular opinion.

The problem of Ethology has received substantially the same interpretation in all the recent works. It is at least to discern, to interpret and to classify the fundamental types of human character. But popular thought has pressed hard on the struggling scientific intelligence; and if we were asked what, at the present time, is the immediate concern of the new study, we should answer that, whether consciously or not, it is striving to reduce to a scientific form two disconnected classifications of character which it has inherited from popular thought. One is the famous doctrine of the four temperaments, once a learned, now a popular conception. The other is the threefold classification—men of thought, men of action, men of feeling. The literary man no more than "the man in the street" knows what relation the first of these classifi-

cations bears to the second. The first is called a classification of temperaments not of character ; that is enough for him : and he applies a type of the one or of the other, as it suits his purpose. Thus he obtains some central conception, however abstract, of an individual character ; and if the present inquiry of psychologists meets with any measure of success, one of its fruits will be to furnish, in place of incomplete and disconnected classifications, a single one more coherent and exhaustive.

But the struggle of Ethology with popular thought is not only shown in the attempt to reach a single and complete classification but also in the endeavour to interpret its several types. For instance, if it is a type of the second classification, ‘the man of action,’ it is an abstract quality. We are given this quality as a leading characteristic, and in some sense we are supposed to understand that it is predominant, but we are not told what are the secondary characteristics of the type. Here it is the business of psychology to deduce these secondary characteristics. If, on the other hand, we take one of the types of the four temperaments, for instance the sanguine type, and disregard its antiquated physiology, here we are not given a single abstract quality as predominant, but several of indeterminate standing. Some of these qualities are found in most accounts, and we may assume them to be those which long and repeated observations have found to coexist. Thus we find it stated that the sanguine man shows quickness of feeling and thought, but is superficial and inconstant, a lover of pleasure and very hopeful, and in his will wanting in firmness and self-control. Here in distinction from the last case as we are given no leading characteristic it is the business of psychology to discover it. For where a group of qualities is constantly united in both sexes, in different races and remarked at long intervals of time, they must possess some inner bond of connexion. It is the business of psychology to discover this connexion.

With this conception of the immediate problem of Ethology, let us see how M. Malapert deals with these qualities, how he interprets their connexion and how far he succeeds in combining the classifications of popular thought. What is his method ? His method is to take the three universal functions of mind,—Feeling, Thought and Conation (*activité*),—to discover the fundamental varieties of each and afterwards to consider their interrelation. In “a given individual,” he tells us, “feeling, activity and intelligence react upon one another, so that the particular form of one is closely connected with the particular form of the others. . . .”¹ It is perhaps strange to be told that feeling, thought and activity react, when mental activity presumably consists in this interaction. But the relation of activity to thought and feeling is so obscurely presented and little understood in general psychology that it is inevitably reflected in the applied science and injures its classifications.

¹ P. 126.

And here it is as well to remark that the popular types of the active man, the man of thought and the man of feeling, have been rather hastily assumed to coincide with a "predominance" of one of the universal constituents or functions. This assumption is not peculiar to M. Malapert; it is common to most of his predecessors. It is assumed by no less an authority than Bain. But what is ordinarily meant by the active man is one who *in comparison with other men* discovers an unusual degree of physical activity. There is no statement of the relation of his activity to other constituents in himself. In the second place, psychical activity, as understood by psychologists to mean a universal mental function, is revealed as much in thought, emotion and will as in muscular action; and supposing that this activity were "predominant" in a given individual, it would not follow that he would be—in the popular sense—an 'active' man, or a 'man of action'.

As to the use of this term "predominance" in ethology, I have, in previous reviews, referred to its vagueness. No term is more prominent in the French and English works on the theory of character. It is sufficiently intelligible as applied in the popular use to signify the superior force of one emotion or sentiment over other emotions and sentiments in the same individual. But no one has thought it worth while to inquire what just, precise and uniform meaning can be attached to the predominance of one of the universal mental constituents over the rest. These constituents at least have no resemblance to individual units that act externally on one another. And if we take one of the metaphors by which psychologists have endeavoured to express their mutual implication, how can one "aspect" of a mental fact be predominant over its other aspects? Is there any intelligible meaning to the predominance of thought over activity, when in order to be predominant thought must be itself activity?

But M. Malapert, while he bases his classification ostensibly on this predominance, yet, by the cautious way in which he interprets the principle and his detailed study of concrete types, escapes much of the confusion that would seem to follow from it in practice. Thus in reference to one of his predecessors, M. Fouillée, he protests against treating the subject as pure logicians; and we may commend his wisdom in inquiring, not as to any general predominance, but "what kind of intelligence or activity coincides with a given character of feeling".¹ "To say with M. Fouillée that there exist people endowed with *much* feeling and at the same time with *much* intelligence and with *little* will; others, on the contrary, with *much* feeling, *little* intelligence and with *much* will . . . is to employ words that have little precision of meaning, and even to miss the real question. Without any doubt a man who is very susceptible to emotion may have a *highly developed* intelligence, but it will differ unmistakably both in its character

¹ P. 126.

and direction from the highly developed intelligence of which an apathetic man is capable. The biologist does not ask whether a *respiratory system* is accompanied by a *circulatory system*, but what determinate form of the one is united to a given determinate form of the other. In the same way the psychologist should consider what determinate form of activity or intelligence coincides with a given determinate form of feeling."¹

I think that if M. Malapert had followed out his own excellent advice, he would have substituted for the conception of a quantitative relation between the inseparable mental constituents the conception of a qualitative relation, and his work would have gained in accuracy and clearness.

In the types of 'temperament,' on the other hand, a quantitative relation must be assumed. M. Malapert treats them as modes of Feeling (*sensibilité*), and he includes in the meaning of this term not merely states of pleasure and pain (*états affectifs*), but also—what we should call conation—impulses and desires (*tendances affectives*).² His four types of feeling—*les apathiques*, *les sensitifs*, *les émotifs*, *les passionnés*—correspond closely to the characters commonly ascribed to the phlegmatic, sanguine, nervous and biliary temperaments. How then does he interpret the connexion of qualities of each of these types; what does he regard as the central or primary quality of each? Let us commence with the apathetic. As the name implies people of this type are capable of little feeling, and we should take this as their central quality. They are commonly contrasted with the emotional. The one, says our author, "resist all stimuli, remain indifferent, impassible. . . . At the opposite extreme are those who feel all emotions with an astonishing intensity."³ Let us then suppose that the central quality of the apathetic is the absence, that of the emotional the presence, of intense feeling. But another quality is implied and seems to possess an equal importance. We cannot refer to the emotional without suggesting the quickness of their reaction. It seems to be a law, says our author, that "quickness and intensity are united: the nervous instability of the subject being the common cause of these two harmonious results".⁴ The cases of hyperesthesia, where the intensity of feeling is extreme, are those where "it is most sudden and instantaneous".⁵ But the apathetic are so slow to feel, that sometimes their emotions affect them only in retrospection.⁶ It is one of the interesting points in our author's method to give salience to these types by instancing their morbid developments. Thus in chorea and in the stupor of epilepsy, we have an extreme example of the apathetic type—a general depression of feeling and the tendency to movement. These patients are indifferent to everything—"persons, dangers, threats and promises".⁷ In other nervous diseases, as

¹ P. 127.

⁵ *Ibid.*

² P. 26.

⁶ P. 30.

³ P. 29.

⁷ P. 170.

⁴ P. 31.

hysteria and neurasthenia, we have extreme examples of the emotional type—a disposition “to feel emotions whose violence, frequency and persistence are out of all proportion to their causes”¹ This reference to the persistence of feeling introduces us to a new quality of the emotional type which M. Malapert regards as essential to it. And here he but follows the general account in which the persistency of emotion is emphasised quite as much as its intensity. In one place he seems to derive the intensity from the persistence. The prolongation of feeling he thinks enables it to “excite sympathetically a more or less considerable mass of other states of feeling . . .”² As a result, the feeling “acquires a greater intensity”³ It is in respect of its great persistency of feeling that the melancholic or emotional type contrasts with the sanguine. The sanguine is always described as superficial. In the sanguine too we have a combination of qualities—quickness of feeling and instability (*sensibilité vive mais assez passagère*). From these opposite qualities of the emotional and sanguine types, our author deduces the melancholy of the one and the habitual cheerfulness of the other. The light inconstant nature of the sanguine “protects him against violent grief and prolonged dejection”⁴ He is a “born optimist”⁵ his opposite a born pessimist.

Let us now take the qualities of intellect, conation and will which our author deduces from these innate qualities of emotional disposition. In respect of the sanguine (*les sensitifs*) “all degrees of intelligence are possible, but not all forms”⁶ In this type there is always “a giddiness (*étourderie*) and want of reflexion; their multiplicity of sensations, and points of view, their mobility, counteract prolonged thought and sustained application . . .”⁷ Hence too their will is “unstable and capricious”; inhibitory or “negative volition is more or less completely absent”⁸

What on the other hand are the effects of the disposition to intense and persistent emotion? It has been remarked by Bain, Wundt and Fére, says our author, that this disposition is accompanied by an “overactive memory”⁹ But the memory is partial; it is led to neglect all that has not “an emotional value,”¹⁰ “logical and properly intellectual relations are at every moment modified by emotion”. On the other hand this disposition tends to produce “a development of imagination”. The images are coloured with emotion and in their turn tend to “maintain and renew emotion”¹¹ And where this disposition is united to a high quality of intelligence it becomes “the intellectual temperament of the artist”.

But all emotions are not of the same character. Two varieties are referred to,—the stimulating and depressing,—and according

¹ P. 28.

² P. 33.

³ *Ibid.*

⁴ P. 37.

⁵ *Ibid.*

⁶ P. 140.

⁷ *Ibid.*

⁸ P. 173.

⁹ P. 143.

¹⁰ *Ibid.*

¹¹ *Ibid.*

as one or the other is predominant, so is the effect different. The depressing emotions slow the reaction time: the stimulating accelerate it. And thus we have two sub-types of the emotional character—the melancholy and the irritable (*émotif-melancolique, émotif-irritable*).¹ It is one of M. Malapert's merits to escape, as he progresses in his work, from mere generalities and grapple with the perplexing detail of his subject. But he sometimes enables us to correct his own premisses. Thus we had been led to suppose that the melancholy of the emotional type was the result of its intense emotions; but we now see that it is the result rather of their painful and depressing quality. And the quickness too which we had supposed to be combined with intensity is not combined with it when the emotions are of a depressing character. The intensely irritable, on the contrary, if quick and intense of feeling, show no disposition to persistent melancholy. They are always quivering with emotion, palpitating with anxiety or hope, passing suddenly from enthusiasm to discouragement, from the most expansive gaiety to the gloomiest melancholy.² It must be admitted that in this sub-type we have departed far from the emotional character first described. Its essential quality, its persistency of feeling, is no longer present. Instead we have a type so unstable, and capricious that it seems to pass over into the opposite type of the sanguine. This illustrates the difficulty of fixing the primary qualities of each type. Even the sanguine man, so uniformly unstable, has at least one emotion that contradicts this general rule. According to all account she is persistent in hope—a born optimist; and this emotion renders him phlegmatic to its opposite.

The ancient types of the Phlegmatic, the Sanguine and Nervous are sufficiently coherent, even in the popular description, to tempt the psychologist to their reconstruction. But the Bilious presents unusual difficulties. The different qualities of emotional disposition, the quickness or slowness, the superficiality or persistence, the faintness or intensity of feeling have already been exhausted in the description of the preceding types. The phlegmatic are slow and obtuse, the sanguine quick and superficial, the nervous intense and persistent. To these pairs, a third quality is united. The phlegmatic are, like the nervous, persistent, so far as any feeling is elicited, the sanguine show considerable intensity and the nervous are, like the sanguine, quick. What qualities of emotional disposition or what combination of them are left to us to differentiate the bilious or passionate type? In the common accounts, it approximates to the man of action. The Napoleons and Caesars are said to belong to it. But M. Malapert regards the man of action as a distinctive type, nor does he place the passionate under it, but under the co-ordinate class of feeling. Hence it would seem to be difficult for him to give any

¹ Pp. 223, 226.

² P. 226.

coherent and distinctive account of them. Like the sanguine, he regards them as quick of feeling (*sensibilité très vive encore*). But he cannot define them by such qualities. He reverts to his distinction between states of feeling (*états affectifs*) and tendencies of feeling (*tendances affectives*). The susceptibility to intense emotion, he assures us, "is not necessarily united to the impetuosity of passion . . .".¹ We can therefore distinguish the bilious type by the intensity or passion of its desires.

We should have expected that M. Malapert would not have co-ordinated this type with the three with which it is popularly presented, that he would have classed it, not as a type of feeling, but of conation (*activité*), had he not already included conation in feeling (*sensibilité*). What intelligible and consistent account can he give of conation as itself a fundamental function determining a generic type of character. But admitting his principles how can he succeed in distinguishing this type by the intensity or passion of its desire from those which have preceded it? Desire depends on feeling and this is his difficulty. As are the feelings of the preceding types, so are their desires. If it is difficult to arouse feeling in the apathetic, it is difficult to stimulate desire. If the sanguine are quick and superficial of feeling, so are their desires lively but inconstant. If the emotional have intense and lasting emotions, the same qualities pass into their desires. "It seems indeed," he admits, "that weakness of desire is linked and correlated to a kind of torpor of feeling. . . . True apathy is then both feebleness of desire and feebleness of feeling. However, it sometimes happens that apathy is combined with intense desire; which may arise from two principal causes. Sometimes the tendencies though having a certain force are deficient in feeling, I mean they are not readily excited; their characteristic manner is calm, . . . but if a strong impression is produced, it may persist and after a period of incubation produce fiery and impetuous impulses."² Yes; if intense emotion is at length produced, the desire also will be intense. But under these conditions, the apathetic type is confounded with the passionate, if intense desire is the distinguishing quality of the latter. On the other hand, if we emphasise in the passionate, the quickness of its desires, how are we to distinguish it from the sanguine? Have not the sanguine quick and explosive desires, intense but unstable? It is in childhood, we are often told, that the sanguine type is most purely represented and in which these characters are most conspicuous. But our author distinguishes two chief varieties of the passionate, those of unstable, those of persistent desire (*passionnés instables; passionnés unifiés*);³ and if the former dissolve in the sanguine, how shall we distinguish the latter from the nervous? Have these troubled natures no desires corresponding to their intense and prolonged emotions?

¹ P. 42.

² *Ibid.*

³ *Ibid.*

In their griefs have they no passionate longing? Have their morbid fears no desire to escape from real or imaginary dangers? Has their regret no vain yearning? Does a brooding anger that "nurses" its wrath cherish no schemes of revenge? But, says our author, "the religious sentiment of a Fénelon differs strangely from the mystic impetuosity of a Sainte Thérèse, the sensibility of a Racine or even a Diderot from the insatiable charity of a Saint Vincent de Paul. In short two natures dominated by an extreme liveliness of feeling are profoundly distinguished where one is in addition characterised by violent desire (*ardeur*)."¹ The emotion of the one is "inward, disturbed and suffering. The second more vigorous, loving or hating without measure, always eager to escape from themselves with a need, constantly renewed, of satisfying their passions."¹ That M. Malapert is vividly portraying real types may be admitted; but the second does not correspond with what we had taken to be the essential characteristic of the passionate. Intense desire is common to both types. But there are desires which, however noble, are impotent, and desires which are adjusted to the conditions of life. Consider the inward and withdrawn character of the one, the outwardly expanding character of the other. There lies their salient difference. But this difference touches merely the diverse character of their desires. It will admit of our classing the bilious as a subordinate type, but offers us no grounds on which to co-ordinate it with the preceding types.

Such in outline is the interpretation which our author gives of these famous types—not ostensibly indeed—but they press upon his thought and force recognition, and beneath their several disguises, as the sensitive, emotional, passionate and apathetic, we detect their presence and familiar characteristics. If he has not been uniformly successful in all of them, if their central qualities have not yet been finally established, we must bear in mind the difficulty of the task. On the whole he has presented the best, the most coherent, the most genuinely psychological interpretation they have yet received. The suggestiveness of these types is perennial. They could not have survived centuries of use unless some profound truths were embodied in them. But they are drawn in waving outlines difficult to seize.

We have now to consider the final classification of M. Malapert, and the relation which the two popular classifications bear to it. "In a character as in an organism," he says, "there are dominant systems and others subordinate, there is a main-spring which impresses on the rest its direction and velocity, there is a certain function preponderant . . ."² But this function dominates, but does not exclude. In accordance with this principle, he counts six generic types; and each *genus* has its subordinate species. These fundamental types are—1, the apathetic;

¹ P. 43.

² P. 206.

2, the feeling (*les affectifs*) ; 3, the intellectual ; 4, the active ; 5, the resolute (*les volontaires*) ; 6, the balanced. The first is a type of the temperaments. The second contains, as its species, the remaining three—the sensitive, emotional and passionate. The second, third and fourth *genus* are the popular types of the man of feeling, the man of thought, and the active man. We have thus a synthesis of the two popular classifications. But how does the first type conform to the author's principle ? What is predominant in the apathetic man ? He sins by deficiency of all the mental functions, not by excess of any. Nor, as the name implies, can the balanced show any such predominance ; but our author contends that the very equipoise in which it consists is a "kind of dominant character,"¹ and if Will is predominant in the resolute, as a mode of conation, we should expect this type to be subordinated to the *genus* activity instead of co-ordinated with it.

In the author's treatment of the intellectual *genus*, we realise the straits to which his principle confines him. Every type of the temperaments must be excluded from it, because in them feeling controls thought. But one species of the intellectual is the *dilettanti*, and there is no incompatibility between it and the sanguine ; the superficial and versatile intellect of the one seems admirably adapted to the superficial and versatile emotions of the other. And in the passionate type, is there an essential incompatibility between its ardour of desire and the intellectual life ? M. Malapert is aware that there are men who are possessed of a genuine passion for knowledge. They are one of his admitted species. But, he protests, they are not to be confused with the passionate, properly so called, "their purely intellectual passion" having particular effects of its own.² And with regard to the apathetic, as many writers have maintained that the intellectual life is destructive of emotion, M. Malapert, whilst denying the general law, is constrained to admit the possibility.³ The intellectual man is sometimes, through deadness to emotion, an apathetic.

The active type presents unusual difficulties. For is there not an activity of thought and are not the intellectual eminently active ? No; as M. Malapert understands the term—the popular sense in which the active man is opposed to the man of thought—they are not. But he also understands by the term 'activity' a universal mental function and in this sense they are. In this type we find "a natural and ceaselessly renewed tendency for action". And, like M. Ribot, he both regards it as based on the predominance of a universal function, yet having this contracted outlet that those who belong to it "live above all externally".⁴ With regard to their feelings they are like the sanguine, to whom they "sometimes approximate," "expansive and mobile," and inclined to look at things on their pleasant side ; but that

¹ P. 208.

² P. 235.

³ P. 233.

⁴ P. 235.

which distinguishes them is that "activity lives for itself, is not subordinated to feeling".¹ With regard to their intelligence it "sins always by defect of reflexion, has no interest in what is unattainable in the ideal".²

We have now passed in review the main features of M. Malapert's classification. No one who has experienced the difficulties of the task could expect it to be final. At least it is better and more complete than any that has preceded it. It is interesting as an attempt to unify the disconnected classifications of popular thought; and its success would have been greater had the author discerned the limits within which alone the quantitative conception of 'predominance' is applicable. Constrained by this conception of his predecessors, his fundamental types sometimes appear arbitrary, because they are not in harmony with it, and the arguments to justify their concordance, sophistical.

ALEXANDER F. SHAND.

Ueber die Bedeutung des Weberschen Gesetzes. Beiträge zur Psychologie des Vergleichens und Messens. Von A. MEINONG. Hamburg und Leipzig: Leopold Voss, 1896. Pp. 164.

THE present work consists essentially of a single thesis proved by a single argument. The thesis is at once simple and ingenious, the argument at once lucid and subtle. The author avoids almost all the mistakes and confusions which beset writers on psychical measurement, and makes several important distinctions which are rarely, if ever, to be met with elsewhere.

Herr Meinong's thesis is, briefly, as follows: The true import of Weber's Law is, that equal dissimilarities (*Verschiedenheiten*) in the stimuli correspond to equal dissimilarities in the corresponding sensations; while the dissimilarity of two measurable quantities of the same kind may be regarded as measured by the difference of the logarithms of these quantities. Thus where sensations are what the author calls extensive, they are directly proportional to their stimuli, though wherever the sensations are quantitative, their dissimilarity is proportional, as in Fechner's formula, to the difference of the logarithms of the stimuli—provided these be measurable quantities of the same kind. This double contention depends upon the distinction between dissimilarity (*Verschiedenheit*) and mathematical difference (*Unterschied*). The use made of this distinction demands a careful account of quantity and measurement, of indivisible quantities, and of relations which are quantities. I am unacquainted with any better discussion of these topics than that contained in the present volume, and the points where the author appears mistaken do not, I think, invalidate the most important part of his thesis.

¹ P. 236.

² *Ibid.*

The first section of the book consists of a discussion of the nature and range of quantity. It is pointed out that quantities need not be divisible, since relations may be quantities. Distance in space, for example, is unquestionably both a quantity and a relation : to suppose distance divisible, can only arise from a confusion between distance and length (*Strecke*). In like manner, the author continues, similarity and dissimilarity are quantities : two things may be more or less similar, but the similarity is certainly indivisible.

In this sweeping assertion that similarity and dissimilarity are always quantities, the author ignores an important controversy. Had he applied his doctrine to the relations of other pairs of terms than quantities of the same kind, it would, I think, have led him into serious errors. If the relations in question are reducible to identity and diversity of content, they cease to be properly quantities. Moreover this reduction is certainly valid in some cases. Herr Meinong asserts, for example, that between a colour and a tone there is more difference than between two colours (p. 44). It would be truer to say that there are more differences. Wherever the relations in question are reducible to complete identity in some points, and complete diversity in others, there quantity seems not properly applicable. Diversity of content appears to be incapable of quantity : we cannot say that diversity in respect of one content is equal or unequal to diversity in respect of another. But there are other cases—and it is to these, fortunately, that the author applies his doctrine—where a difference exists which is not reducible to mere diversity of content. Such cases are, among others, differences of position and of magnitude ; and differences of magnitude, naturally, have the chief importance in discussing Weber's Law.

The second section deals with comparison, especially as to magnitude. Apart from the possible objection that magnitude is a notion essentially dependent upon comparison, and that the present section ought, therefore, to have been the first, the account of quantitative comparison is excellent. Likeness and unlikeness are notions not demanding a definition ; but they are not the only results of quantitative comparison, which is unique in yielding, not mere difference of magnitude, but the relations of greater and less. Whatever appears different, on immediate comparison, is different; but what is different only appears so down to a certain limit. Below this limit, a difference is imperceptible. Differences should not be described by their perceptibility, where such a description can be avoided ; for our knowledge of the difference perceived is prior to our knowledge of the perception of difference, and a direct treatment of differences, where possible, is preferable to the indirect treatment by means of their perceptibility. Two just perceptible differences need not be equal ; but we have a well-grounded presumption, in favour of their equality, where there is equal susceptibility to differences.

Comparison of parts and measurement form the subject of the third section. The author recognises, what is so often overlooked, that numerical measurement proper depends upon divisibility, and is therefore inapplicable to quantities which are relations. He points out, nevertheless, that, where indivisible quantities have divisible correlates, all the practical advantages of measurement may often be obtained by means of these correlates. Measurement proper is either mediate or immediate: the latter is only applicable to space and time. But there is, for intensive quantities, a third kind of measurement, which the author calls substitutive (*surrogativ*), because what is really measured is an extensive substitute. For example, distance, being a relation, is indivisible; but it is always associated with a length, which is divisible. Distances, therefore, are regarded as measured by means of the correlated lengths. Similarly velocities are regarded as measured by means of the lengths traversed in a given time. In such cases, though another quantity is really measured in place of the quantity in question, we regard the latter as measured, because the operation ensures one or more of the three advantages derived from measurement proper. These advantages are: (1) That an element of a continuum is replaced by a discrete term, namely a number, and the intractability of the continuum is relegated to the unit; (2) that the number thus obtained has the same relation of magnitude to other numbers as the correlated quantities have; (3) that the absolute limits, zero and infinity, which have validity for indivisible as well as for divisible quantities, are the same for the numbers and for the corresponding quantities. All these advantages are secured in measuring distances and velocities; the first only is secured in measuring temperature by the thermometer. This last case illustrates that measurement is not sharply separated from mere determination without measurement.

This excellent discussion of the sense in which indivisible quantities can be measured is applied, in the fourth section, to the measurement of the dissimilarity between quantities of the same kind. Dissimilarity is a relation, and therefore indivisible. In the case of two quantities of the same kind, their dissimilarity appears to be also a quantity.¹ With space and time, the distance is associated with an intervening length; but in some cases where dissimilarity is a quantity there is, according to Herr Meinong, no intervening length. By an intervening length he means, apparently, no more than the power of continuous variation from the one term to the other. As an instance where this is not possible, he gives the dissimilarity of a colour and a tone. This, however, is not properly a quantity, but a difference of content. In all cases where dissimilarity is a quantity, there must be, I think, an inter-

¹ "Dissimilarity" is not quite an adequate translation of *Verschiedenheit*, but the word "difference" is required in the mathematical sense, and it is necessary to preserve the distinction by using different words for the two ideas.

vening length in the author's sense. As, however, the subsequent discussion is confined to the dissimilarity of measurable quantities of the same kind, the above limitation does not impair the validity of the argument.

The dissimilarity of two quantities is evidently capable, at most, of a substitutive measurement. Where the quantities themselves are measurable, the dissimilarity must be measured, if measurable at all, by some function of the two quantities. This function is not the mathematical difference, for the dissimilarity is infinite when one of the quantities is zero and the other finite. Moreover, the mathematical difference is a radically distinct idea, dependent wholly on divisibility. Thus the difference of two lengths is a length, but their dissimilarity is a relation. The dissimilarity between 1 and 2 is greater than that between 6 and 7, though the difference is the same. Also the mathematical differences may differ when the dissimilarities are the same.

This distinction is certainly of great importance. It is one, moreover, which mathematics and preoccupation with spatio-temporal quantities tend to obscure. In finding a function for measuring dissimilarity, certain requirements are laid down. (1) The dissimilarity must vanish when the quantities are equal; (2) It must be infinite when one quantity is finite and the other is zero or infinite; (3) The dissimilarity between A and B *plus* that between B and C must be equal to that between A and C. These conditions are essentially similar to those which, in non-Euclidean Geometry, regulate the expression of distance in terms of co-ordinates, and Herr Meinong might have simplified a needlessly complicated piece of mathematics by reference to this analogous case. The conclusion is, that the function required is the logarithm of the ratio, just as, in non-Euclidean Geometry, it is the logarithm of the Anharmonic Ratio.¹ To this conclusion, if we remember the meaning of substitutive measurement, there seems no valid objection. It must be remembered that, in such measurement, the end to be attained is mainly practical—theoretically, the quantities in question are not measured at all. But there is a proposition, essential to Herr Meinong's formula, which has great theoretical importance. If the dissimilarity of A and B is equal to that of C and D, then A, B, C, D are proportionals—a theorem which, if correct, throws a new light on Weber's Law.

The fifth section deals with psychical measurement and the interpretation of Weber's Law. This section is somewhat marred, I think, by a division of psychical quantities into extensive and intensive. The author does not accept the view that psychical quantities must be intensive. He urges, in agreement with Mr. Bradley,² that psychical quantities may be extensive, since the pre-

¹ Cf., e.g., Whitehead, *Universal Algebra*, book vi., chap. i.

² "What Do We Mean by the Intensity of Psychical States?" *MIND*, 1895.

sented, as such, is psychical. He does not explicitly proceed, like Mr. Bradley in a subsequent article, to infer that psychical states may be extended, but this inference seems irresistible. If the presented, as such, is psychical, then every possible object of experience is psychical. This leads either to the philosophy of Berkeley, or to an unknowable thing in itself. To urge, as Herr Meinong does, that imagined space is measurable and divisible, though purely psychical, seems either irrelevant or untrue. For imagined space is as little mental as real space; it differs from real space only in the fact that it does not exist: while the imagination of space, which does exist, is not divisible. We have an imagination of something divisible, but the imagination, which alone is mental, is not divisible. Such an argument, therefore, cannot prove the existence of psychical quantities which are divisible. This question is too wide for a review, but I cannot avoid the conviction that to regard the presented as necessarily psychical must make havoc of a most fundamental distinction.

The discussion of psychical measurement treats extensive and intensive psychical quantities separately. In the supposed case of the former, the author arrives at the conclusion that they are simply proportional to their stimuli. But his chief concern is with dissimilarities. Weber's Law is regarded as showing that, if $r_1 r_2 r_3 r_4$ be four stimuli, and $e_1 e_2 e_3 e_4$ the corresponding sensations, then if $r_1 : r_2 = r_3 : r_4$, the dissimilarity of e_1 and e_2 is equal to that of e_3 and e_4 . It follows from the previous section that equal dissimilarities of sensation correspond to equal dissimilarities of stimulus. No inference is possible, in general, as to the magnitude of the (intensive) sensations themselves: Fechner's deduction of the logarithmic formula depends upon a confusion of difference and dissimilarity. The same confusion underlies the hypothesis, propped up by a so-called "law of relativity," that the relative difference of two sensations is to be substituted for the absolute difference in Fechner's deduction. The discussion ends with a criticism of J. Merkel's articles on the relation between stimulus and sensation.¹ Merkel professes to prove experimentally that the sensation midway between two given qualitatively similar sensations corresponds to the arithmetic mean of the stimuli corresponding to the given sensations. On Herr Meinong's hypothesis, it should correspond to the geometric mean, and he candidly confesses that his theory is incompatible with this result. But he is amply justified, I think, in holding such experiments to be inconclusive. Merkel supposed numerical measurement directly applicable to quantitative sensations, and accordingly regarded the idea of a mean sensation as perfectly definite. It must rather be held that such a discussion as Herr Meinong's is necessary before such a phrase acquires any meaning. Merkel confesses (*Phil. Stud.*, x., p. 220) that a comparison of feelings of dissimilarity as

¹ *Phil. Stud.*, iv., v., x.

such was not attempted, yet such a comparison, difficult as it would be in practice, is alone relevant to our author's theory.

Many other points, which call for discussion, have been unnoticed, as not bearing directly on the argument of the work. There are throughout many subtle and suggestive observations on quantity, measurement, and relations. The author's contention, if it perhaps simplifies the question, especially in the interpretation of Weber's Law, with somewhat excessive optimism, is based on very close and careful reasoning, and offers, on essentials, very few vulnerable points.

B. RUSSELL.

Psychologie als Erfahrungswissenschaft. Von HANS CORNELIUS.
Leipzig : Druck und Verlag von B. G. Teubner. London :
Williams & Norgate, 1897. Pp. xv., 445.

THE title of this work is somewhat deceptive. It is concerned more with theory of knowledge than with psychology ; indeed, it would seem that the author does not recognise the distinction between the two. He assumes that an account of the way in which knowledge grows in the individual mind is at the same time an explanation of its nature and validity. The result is not good ; both his psychology and theory of knowledge suffer. He has written a valuable and interesting book, as a man of his ability could not fail to do. But the confusion between two distinct lines of inquiry is a great drawback.

The theory of knowledge advocated by Prof. Cornelius is clear and simple. He begins by recognising what he calls the "symbolic function of memory-images" as an ultimate and inexplicable fact. The present image represents for the consciousness of the subject the previous experience of which it is a reproduction. It is impossible to say how it comes to play this part. Its representative function must simply be accepted as a final inexplicability (pp. 20-28). On the other hand, he makes an interesting attempt to trace all other symbolic functions of presentation to that which is involved in memory. I do not think that this attempt is successful (pp. 57-62). But this part of his work is suggestive. Given a mental image which is symbolic of an experience not actually present at the moment, the question of the truth or falsehood of the symbolism may arise. The test of truth is verification by the actual experience of the cognitive subject. If it is possible for the subject to actualise his symbols by obtaining the experiences symbolised in the order and manner in which they are symbolised, his mental representations are true. The conception of objective existence is identical with the conception of the possible realisation in terms of individual experience of what is ideally represented by the cognitive subject.

The author applies this theory to explain the nature of our

knowledge both of mind and matter. Its application to mind is the more interesting, but the English reader will be better enabled to catch the drift of the author if we first refer to his account of our belief in the external world. In his fifth chapter, which treats of this topic, he makes no reference to Mill's famous discussion in the *Examination of Hamilton*, and he does not use the phrase "permanent possibility of sensations". Yet his theory is simply identical with Mill's. Concepts of material objects as existing independently of the subject which cognises them are for him, as for Mill, simply concepts of the possibility of obtaining certain sensations by the observance of certain conditions. He calls them "concepts of empirical connexion". A material object is for him simply an organised group of expectations. He does not deal with the objections which have been brought against this theory; indeed, he seems to be unaware of them. For instance, he does not face the difficulty that the order and connexion of physical facts is quite different from any possible order and connexion of subjective experiences in the way of sensation, —e.g., that though we cannot see or touch simultaneously the inside and the outside of a solid body, yet both exist simultaneously. Nor does he explain how it is that physical science recognises the existence of much which cannot by its very nature be actually experienced in the way of sensation,—e.g., molecules and their interaction, the luminiferous ether, and so on. It is characteristic of Cornelius's point of view that he refuses to assume the existence of the material world as a datum for explaining the process by which the individual mind comes to be aware of such a world. For him this would be arguing in a circle. He supposes that the only means of ascertaining the nature and validity of our knowledge of the external world is by tracing its psychological growth. If we assume such a world to be given at the outset, we already prejudge the question which is to be solved. In following this line of thought, Prof. Cornelius appears to us to place himself in an altogether untenable position. He confuses two distinct problems; on the one hand, there is the question, How does the apprehension of an external world, such as it actually exists for ordinary consciousness, come into being? on the other, there is the question, whether the view taken of the external world by the ordinary consciousness is a right one; and what sort of correction it requires from critical reflexion. If these two problems are identified, confusion may arise in two ways. Either psychology is substituted for epistemology, or epistemology for psychology. In the first case, an account of the stages through which the ordinary consciousness of the external world has arisen, takes the place of a criticism of its validity. In the second case, an account is given, not of the processes by which the ordinary consciousness of the external world arises, but of the processes by which an author supposes that what he takes to be the true view of external reality may be obtained. It is the second course which is followed

by Cornelius. His doctrine of the nature of external reality is determined from the outset by his general theory of knowledge ; and the psychological part of his work simply consists in showing how an individual mind may attain, not the actually existing apprehension of an external world, with all its possible errors and confusions, but that view of it which, according to Cornelius, is the true one. The result is that his psychology, so far as regards this question, is merely his theory of knowledge in masquerade. We have still to consider the alleged circle of assuming the existence of an external world when the problem is to trace its origin. In reality, there is no such circle, so long as we retain the strictly psychological attitude. The psychologist has to investigate the processes through which the presentation of an external world grows up in an individual subject. It would certainly be a circle to assume that this subject whom he is studying already possesses a knowledge of the external world, but it is no circle to assume that he himself possesses such a knowledge. If he did not possess such a knowledge, the problem could have no existence for him.

The most interesting application which Cornelius makes of his theory of knowledge is to the nature of psychological analysis. We may merely by attention, without alteration of other conditions, succeed in discriminating in a presented object constituents which we have previously failed to discriminate. On the other hand, so soon as attention is withdrawn, the distinctions which previously existed disappear. In a musical note, for example, we only discriminate overtones when we specially attend to them. The problem discussed by Cornelius is as follows : What sort of existence, if any, have the discriminated differences before they are discerned and after they have ceased to be discerned ? In both cases he answers in accordance with his general theory of knowledge that undiscriminated differences exist only as permanent possibilities of discrimination. If I say that in a complex of sensible qualities elements exist which I do not distinguish, I merely mean, or at least ought merely to mean, that these elements would be discernible by me under certain conditions. This view certainly evades many difficulties, and it has a neatness which is attractive. For reasons which I have given elsewhere, I cannot myself accept it. It has been criticised most thoroughly by Mr. Shand in his article on " Feeling and Thought " (*MIND*, N.S., No. 28, October, 1898).

The apparent simplicity of Prof. Cornelius's theory of psychological analysis is marred by a further development which the facts compel him to give to it. When differences cease to be discriminated, they ought, according to the theory, to exist only as possibilities of discrimination. It is therefore with something of a shock that we find Cornelius treating them as persistent agencies determining the whole course of mental life. The total

state of consciousness at any moment has its nature determined by elements which at the moment are not distinguished. Cornelius rightly insists on this from beginning to end of his *Psychology*. But he never faces the difficulty of mere unrealised possibilities persisting as operative factors, each contributing its share to determine the nature of our actual experience. It would certainly seem that his doctrine requires considerable modification if it is to be made self-consistent. If we take into account the positive part played by undiscredited factors, it is hard to see how the view of Cornelius differs from such a theory of psychical dispositions as is advocated by Lipps.

The book by no means wholly consists of theory of knowledge substituted for psychology, or of theory of knowledge applied to psychology. It also contains much valuable work of a directly psychological nature. In particular, attention may be drawn to the acute and careful exposition of the mode in which discrimination gradually increases in delicacy; to the discussion of the interesting question whether we can distinguish in the memory-image what we have failed to distinguish in actual perception; to the criticism of atomistic psychology; and to the statement of the laws of association.

Much is made throughout the work of the principle of the "economy of thinking"; but it is difficult to make out whether this principle is to be regarded as epistemological or psychological, or both without distinction. It sometimes seems to figure as an ultimate test of truth; but if we inquire what claim it has to this position, we are left to gather the answer for ourselves. It would seem that Cornelius regards the principle of the economy of thinking as an ultimate test of truth simply because he regards it as a fundamental law of psychical process. But the mere fact that we take as little trouble as possible in the attainment of our ends, whether theoretical or practical, does not seem of itself to constitute a reason why our mode of procedure should be a right one. On the whole, the psychological application of the principle of economy, as it is followed out by Cornelius, is valuable and suggestive; but it throws little light on theory of knowledge.

In conclusion, we must refer to the part played in the psychology of Cornelius by what he calls the "memory-image". If we understand him rightly, he regards the memory-image as always having a certain individuality and independence which make it separately reproducible apart from actual impressional experience. At the same time, he regards all recognition as depending on the memory-image, and the delicacy with which different objects are discriminated as depending on the delicacy with which their memory-images are discriminated. This seems certainly wrong. To refer to no other objections, a man may be able to discriminate objects perfectly well by sight, and yet have virtually no power at all of reproducing visual imagery.

Since I have dwelt so much on points on which I am compelled

260 CRITICAL NOTICES: *Psychologie als Erfahrungswissenschaft.*

to criticise Prof. Cornelius in an adverse sense, I ought to say that, even where I differ from him most, I find him highly stimulating and suggestive ; and that there is much in his book with which I thoroughly concur, and which I find most helpful. The author's style, both of thinking and writing, is distinguished for clearness, simplicity, and elegance.

EDITOR (G. F. S.).

VII.—NEW BOOKS.

Human Immortality: Two Supposed Objections to the Doctrine. By WILLIAM JAMES. London: Archibald Constable. Pp. 126.

IT has become a tacit convention among philosophers to preserve the loftiest and profoundest silence on the very questions which formed the first motive to philosophic effort and still form the culmination of philosophic interest. Hence it seems at first to savour of impertinent *anathæmia* that any one should still be found to take so much as 5000 dollars' worth of (posthumous) interest in the question of his immortality, and it causes a shock of surprise that a great academic institution like Harvard University can be found to endorse such a procedure and to supervise the delivery of an annual "Ingersoll Lecture on the Immortality of Man". Perhaps however it may quiet some alarm among those who dread no worse fate for philosophy than that it should arouse popular interest, to add that even so there is less money spent on the exploration of the future life than on almost any other human fad, from arctic exploration to the recovery of the Lost Tribes, and that the establishment of the Ingersoll Lecture stands alone. Nevertheless the fact remains that even so slight a beginning is calculated to stir up discussion of a topic which is full of all sorts of scientific and religious taboos. When moreover a writer and thinker of Prof. James's eminence is induced to deliver an opinion upon any aspect of such a question, the most jaded and cynical of sceptics may well be pardoned if he finds the equanimity of his indifference slipping from him.

Our author himself however appears quite unconscious of his audacity in braving such prejudices, and handles his thorny subject in a perfectly straightforward and matter-of-fact way, which cannot but arouse the admiration of the less courageous. He has a reply to make to two widespread objections to the belief in a future life, and there is no mistaking the tenor of his answer.

In the first place he will not allow the conclusiveness of the traditional materialist view which infers from the correlation of physical and mental phenomena that consciousness is a function of the brain and that a mental life without a brain is strictly inconceivable. This *production* theory of the working of the brain overlooks an alternative interpretation of the facts. The brain may just as well be regarded as an organ for the *transmission* of a consciousness which manifests itself through a brain with more or less difficulty, but is intrinsically independent of it and belongs to a different order of existence. Now a transmission theory obviously will explain all the facts equally well, and can never be refuted by empirical evidence, for the reason that it simply inverts the causal interpretation of the same psychophysical concomitance. Logically we have always the choice of explaining the higher by the lower or the lower by the higher, and scientifically all we can demand is that their connexion should not be denied. Prof. James points out that his view is not altogether novel, although it has never been properly considered—

a neglect which can hardly continue after the striking manner in which he has called attention to it. Nor is the forlorn hope to be envied on whom will devolve the task of attacking Prof. James's position. For that, logically, seems well-nigh impregnable.

Among the details of the argument it should be noted that Prof. James is careful to point out that he leaves the nature of the mind which manifests itself through the brain-processes an open question, and that for a good pluralist "there may be many minds behind the scenes as well as one". Further he holds that the alternative he supports possesses great advantages over the materialist theory in the explaining of the origination of consciousness, and of the shifting of the psychophysical threshold as well as in the comprehension of supernormal phenomena. As for the difficulty of explaining "how the brain can be an organ for limiting and determining to a certain form a consciousness elsewhere produced," all that is needed is "to retort with a *tu quoque* asking . . . how it can be an organ for producing consciousness out of whole cloth".

Prof. James's second point concerns itself with the objection to an infinite multiplication of immortal beings of a lowly and disgusting character. This objection is rooted in aesthetic sentiment and is answered by an appeal to religious sentiment. Here, however, Prof. James seems to be dealing with less crucial matters and to answer in a less conclusive way. It may be doubted whether the objection to "the incredible and intolerable number" of immortal beings is as modern as he supposes, and was not felt while the world seemed "a comparatively small and snug affair". At all events, the theories of pre-existence and metempsychosis are among the earliest and most universal ingredients in the belief in immortality, and with a little modernising they even now contain a very complete answer to the difficulty in question. Prof. James's suggestion, on the other hand, that God's infinite sympathy transcends ours and embraces even the humblest creatures in its appreciation, postulates a previous decision of the question whether *sub specie eternitatis* individual personalities retain any value. It may be, of course, that from the point of the whole all its parts possess an equal value which is infinite rather than infinitesimal, but the fact remains that most religious and philosophic 'theologies,' wittingly or unwittingly, render this an uncommonly difficult belief to sustain. Still Prof. James can hardly be wrong in thinking that the difficulty he discusses is a real one and that it is a real service to have ventilated it.

For ventilation by the most approved modern methods is what the whole subject most sorely needs. At present it forms one of the darkest and dustiest of the lumber-rooms that are the province of philosophy. It is a mass of decayed traditions and distorted facts, of half-hearted aspirations, broken beliefs and uncompleted inferences, haunted and defiled by savage prejudices which cannot bear the light of day. Hardly any attempt has been made to work out systematically the theoretic possibilities of the subject. Almost all the relevant facts are bitterly disputed. Even the psychological facts as to men's actual thoughts, feelings and desires on the subject are very imperfectly known, and would probably occasion no slight surprise to those who are content to adopt the literary tradition that 'man naturally desires to be immortal'. It is only by a complete change in the social atmosphere which envelops it that the subject can be rendered fit for really rigorous investigation. No one who has tried will underrate either the extreme difficulty and delicacy of the task of rendering the social atmosphere fit for such scientific work or the slowness with which even under the most favourable circumstances it can be achieved. But if Prof. James's gallant efforts to introduce some fresh air

and light are seconded by like-minded lecturers in the future, we may look forward to a time when the work of ventilation will be done, and that of verification can profitably be begun. Perhaps by that time some generous donor will have equipped Harvard, or some other university with a laboratory for the 'psychical researches' which the current 'experimental' methods so conspicuously fail to prosecute.

F. C. S. SCHILLER.

Leibniz. The Monadology and Other Philosophical Writings. Translated with Introduction and Notes by R. LATTA, M.A., D.Phil. Oxford : Clarendon Press, 1898. Pp. vii, 437. (8s. 6d.)

This is a book which should be welcomed by many others besides professional teachers and students of metaphysics, and may indeed be said, in the hackneyed phrase, to fill a real gap. It is remarkable, and not at all to our credit as a nation of educated men, that we have hitherto had no worthy English version of the philosophical writings of Leibniz. By his freedom from pedantic technicalities, the extraordinary range of his studies, and the wonderful suggestiveness of his ideas, Leibniz appeals, more perhaps than any of the great metaphysicians of modern times, to the reflective and educated man who, without being exactly a philosopher, takes an intelligent interest in philosophical speculations, provided they can be put before him in a language he understands. And one has only to think of the writings of Prof. James, or of Du Bois-Reymond, to be reminded that, with the specialists both in Psychology and in Physics, Leibniz is still a living and potent influence. Moreover the chief works of Leibniz have what is from the average reader's point of view the high merit of being as concise and brief as they are free from wearisome technicality. It may be doubted whether any other man could have achieved the feat of compressing a system of Philosophy into a dozen pages ; it is certain that, with the exception of the author of the *Monadology*, no one has ever done so or is likely to do so again. Thus the special characteristics of Leibniz seem to fit him in an uncommon degree for translation, and in Dr. Latta he has found a translator who performs his task with as much learning as accuracy. Were it not for certain translations of other works of Leibniz which have recently been given to the world, it would be indeed "faint praise" to say that Dr. Latta's version is everywhere faithful both to the original text and to the laws of English prose style. As it is, the character of these previous versions, or rather perversions, makes it necessary to say that the present translation is one on which a reader unskilled in French may confidently rely as correctly conveying the sense of the author. The works selected for translation have naturally been those which are of chief importance as containing in a brief compass Leibniz's statement of his characteristic tenets ; the *Monadology* and the *Principles of Nature and Grace* in the first place, of course, and, as illustrative of these *Hauptschriften*, the *New System of the Nature of Substances*, with the "explanations" called forth by it, and one or two other minor tracts. The Introduction, which contains a detailed account of the life and philosophy of Leibniz as well as a critical estimate of his influence on later thought, will henceforth take rank beside Merz's brilliant and all too brief monograph as an indispensable aid to the English student of the philosopher of Leipzig. If Dr. Latta is on the whole less fertile in original suggestion than his predecessor, he is, as would be expected from the scope of his work, much fuller of information on points of detail. There is hardly any

problem of importance suggested by the philosophical works of Leibniz which does not receive discussion and illustration somewhere or other in this admirable introduction. Particularly interesting and valuable is the elaborate examination of the influence of Leibniz upon later thinkers, notably upon Kant and Lotze. If there is any criticism one is tempted to pass upon so learned a discussion, it would be that, in view of English ignorance, the work of Herbart is scarcely discussed at sufficient length. After all, Herbart is not only more akin in spirit to Leibniz than most of his German successors, but may also fairly be said to be the one German philosopher of the great epoch, besides Kant, who is much more than a *magni nominis umbra* to-day. For both these reasons one could wish that Dr. Latta had treated of him in a way that would appeal rather to the many English students who are not acquainted with his works than to the few who are. And while one is about the task of criticism, there are two other minor matters one might mention in which Dr. Latta will hardly carry all his readers with him. His treatment of the relations between Leibniz and Spinoza errs perhaps through a natural charity to the memory of the author whom he has studied to such purpose. Nothing in Leibniz's life is less creditable, when judged by the ordinary standards of honourable men, than his constant endeavours to minimise the importance of Spinoza as a thinker, and his readiness to acquiesce in the popular prejudices against so "impious" a writer. On this point, the language of Mr. Pollock in his *Spinoza* seems not a whit too severe, and it is perhaps a pity that Dr. Latta should have repeated Leibniz's half patronising, half sanctimonious reflexions on his great contemporary without a word of censure. The other point is one of more importance. We hear a great deal in Dr. Latta's Introduction, as we are bound to hear in any account of Leibnitian metaphysics, of "activity" and "force" as constituting the real essence of bodies. But Dr. Latta, like Leibniz himself, omits to explain what "activity" and "force" stand for, over and above certain empirical facts which are ultimately reducible to terms of extension and rate of change of velocity. It is of course clear from what Leibniz and his editor say about Cartesianism that they understand by "force" and "activity" something very much more than convenient symbols for such facts about extension and acceleration, but neither seems prepared with an answer to the question how much more is meant. Yet one cannot but think that, in view of the loose way in which spiritualist writers such as Prof. James are accustomed to use these terms, they should either be rigorously defined or rigorously banished from our philosophical vocabulary. And would it be hypercritical to suggest that "Leibniz's far-reaching suggestion of the unconscious *petites perceptions*," so far from being such a service to psychology as Dr. Latta maintains, has really proved a *damnosa hereditas* of obscurity and confusion? These are however but points of detail, and divergence of opinion about them is only to be expected. The fact remains that Dr. Latta has produced the most elaborate and learned work on Leibniz in the English language, a work for which all future students must be profoundly thankful, and which reflects the utmost credit on the author as well as on the University of Edinburgh, to which part of the Introduction was submitted as a doctoral thesis, and on the Clarendon Press which has undertaken the publication.

A. E. TAYLOR.

An Outline of Philosophy, with Notes Historical and Critical. By JOHN WATSON, LL.D., Professor of Moral Philosophy in Queen's University, Kingston, Canada. Glasgow: James Maclehose & Sons. Pp. xxii., 489.

This is a second edition of the book published by Prof. Watson in 1895 under the title, *Comte, Mill and Spencer, an Outline of Philosophy*. The two titles give some indication of the general nature of the book. As an "outline of philosophy" it has something to say on most of the chief problems of metaphysics or philosophy proper; but it does not directly deal with psychology, logic or economics, and it hardly does more than touch upon the questions of political philosophy, aesthetics and the philosophy of religion. Thus it does not profess to give a "complete system of philosophy," but it is offered as "a manual, which cannot do more than awaken an interest in philosophical problems, and indicate the lines on which in the opinion of the writer they may be solved". It need hardly be added that these lines are the lines of Idealism as it is expressed in the writings of Green and of Mr. Edward Caird. The method of the book is suggested by the original title. The various subjects are treated in logical order, proceeding from the most abstract to the most concrete, while the discussion is throughout kept close to the history of philosophy, each section being developed by exposition and criticism of some notable thinker. Thus Prof. Watson might have added to the names in his original title those of Darwin and Kant. In this new edition the historical element is strongly reinforced by the addition of nearly 200 pages of "notes historical and critical," dealing with specific problems in the writings of Plato, Aristotle, Descartes, Locke, Berkeley, Hume, Kant, Hegel and Lotze. There are obvious educational advantages in such a method as that which Prof. Watson has adopted. By the continual discussion of other theories he prevents the systematic exposition of his own opinions from taking too dogmatic and absolute a form; and, on the other hand, as the general plan of the book is not chronological but logical, the student is enabled to realise the unity of the great philosophical problems much more thoroughly than if he were to read an ordinary "history of philosophy," which resembles too much a mere list (or *catalogue raisonné*) of systems. Yet Prof. Watson's method has its dangers, and the very excellence of his work may be its undoing by tempting students to content themselves with his admirably lucid expositions and to neglect the "first-hand study of the authors" on which he rightly insists.

The book falls naturally into five main parts, discussing (1) the problem of philosophy in general, including such questions as the relation of philosophy to the special sciences and the relativity of knowledge (with special reference to Comte); (2) the philosophy of nature, including geometry, the science of numbers and the physical and biological sciences (with special reference to J. S. Mill and Darwin); (3) the philosophy of mind, or the problem of the relation between subject and object (with special reference to Mr. Spencer); (4) moral philosophy, including the problems of duty, freedom, the *summum bonum*, and rights (with special reference to Kant); and (5) the philosophy of the absolute, including the philosophy of religion and aesthetics (again with special reference to Kant). Obviously this is an immense deal of ground to cover in a single volume — too much to make a complete success possible. Yet, taking into consideration the magnitude of his attempt, Prof. Watson's achievement is remarkable: he has certainly succeeded in putting all the main issues very clearly before his readers. Occasionally, but not often, he allows

himself to commit the sin that doth so easily beset a lecturer, that of reiteration and labouring his point. And, on the other hand, there are portions of the book (*e.g.*, the note on the Association of Ideas and the chapter on the Philosophy of the Absolute) where the discussion is either too condensed to be useful to the student or too general to be adequate to the subject. Of course the improvement of the book in this respect would mean its enlargement, and even the most comprehensive books have spatial limits.

Without attempting to discuss the book in detail, one may remark upon the excellence of Prof. Watson's exposition and his acute yet sympathetic criticism in the chapters and notes which refer to Descartes and Kant, and in the notes on "The Platonic and Aristotelian Criticism of Phenomenalism" and on the views of Aristotle and Hegel regarding the principle of identity. This last note and the note on Descartes and Kant are the most valuable parts of the new material in the volume. The treatment of Mr. Spencer's position is also very clear and fair, and the exposition and criticism of Mill is on the whole very good, although on particular points (*e.g.*, the question of the inconceivability of the opposite as a test of truth) Prof. Watson's argument seems to some extent open to objection. In the new matter there are several things which, apart from their general value, will be of special interest to readers of MIND. In a note on "Agnosticism and Scepticism," Prof. Watson argues acutely against the scepticism of Mr. Alfred Sidgwick, as expressed in an article in MIND (N.S., vol. iii.), and in another note on "The Feeling Soul" there is a very interesting appreciation and criticism of Mr. Bradley's remarkable article in MIND (O.S., vol. xii.), in course of which, with much justice, Prof. Watson suggests that Mr. Bradley's position seems to imply the introducing into Psychology of the "preformation" theory of development, which has been discredited in biology. Again, in an admirable discussion of Lotze's theory of knowledge, Prof. Watson traces to the influence of Lotze the distinction which Mr. Bradley draws between ideas as 'events' and as having 'content,' a distinction which, in the form in which it is made, has had a baneful effect on the argument both of the *Principles of Logic* and of *Appearance and Reality*. Mention ought also to be made of the note on "The Problem of Human Freedom," in which there is some excellent criticism of the Kantian element in the work of T. H. Green. Such discussions as these make the book much more than a mere manual for students. While the main argument runs on familiar lines, it has the freshness that comes of contact with present questions.

R. LATTA.

The Mental Affections of Children : Idiocy, Imbecility, and Insanity.
By WILLIAM W. IRELAND, M.D. London : J. & A. Churchill ;
Edinburgh : James Thin, 1898. Pp. ix, 442.

In his book on the *Mental Affections of Children : Idiocy, Imbecility, and Insanity*, Dr. Ireland continues the studies of his former book, *Idiocy and Imbecility*, incorporating part of the old material. Like the earlier book, this is written mainly for the practical alienist ; but it is not without material for theoretic study, and Dr. Ireland does "not yet despair of receiving some little attention from the students of psychology in Great Britain" (as well as America). He writes out of the fulness of a long experience among idiots and imbeciles ; his many contributions to his selected region of studies have found recognition in all the standard

text-books of insanity, and his concrete descriptions here will be appreciated by alienists at a very high value. Now, what has he to offer to the "student of psychology"? Directly, not very much that could be readily summarised; indirectly, a good deal. "Idiocy" he defines as "mental deficiency, or extreme stupidity, depending on malnutrition or disease of the nervous centres, occurring either before birth or before the evolution of the mental faculties in childhood". The vagueness of this definition is only partially reduced in the subsequent exposition. The "causes" (chapter iii.) of the "malnutrition or disease" are such as these: heredity, consanguine marriages, scrofula, drunkenness, gynagogy, fright to the pregnant mother, epilepsy, neuropathic conditions generally. These terms are all highly general and for the most part vague. The statements made under these heads do not assist us much to conceive precisely how the various conditions become efficient causes. Heredity, for instance, as indeed the author recognises, cannot well be offered as a "cause" until some coherent idea of the notions indicated and focussed by that name is first set forth. For the present, the theory of heredity is only a working hypothesis. Similarly with consanguinity and drunkenness. For the pathology of these we must go to the researches on the insanities of alcoholism. In this chapter, as in several other parts of the book, one is disappointed to note a somewhat ill-informed antipathy to the pathological applications of Darwinism. To Dr. Ireland's numerous misappreciations, not to say sneers, the Darwinian may retort that reversion and the other notions included under Darwinism are at least an effort after a positive causation of positive phenomena, and that words like "the influence of a formative force inherent in the whole organism which suits the size of the skull to the size of the brain" (p. 102) are a mere restatement of the fact, not even a formal explanation. But to return. The classification of the forms of idiocy (chapter iv.) into twelve varieties—genetous or congenital, microcephalic, hydrocephalic, eclampsic, epileptic, paralytic, traumatic, inflammatory, sclerotic, syphilitic, cretinism, idiocy of deprivation—is not altogether congruous with the definition, nor, even from the standpoint of pathology, is it free from cross-divisions; but it is sufficient for clinical purposes. One of the best parts of the book is the account of the histo-pathology of the brain of the genetous idiot. The later observers have produced abundant evidence of "arrested development," nerve-cells diminished in number and abnormal in shape and issuing processes. In some specimens nerve-fibres were found similarly deficient. But after histology has done all it can be expected to do, there remains, even in the idiot nervous system, the "soft play of life," and for further illumination one turns more hopefully towards the applications of functional analysis, after the fruitful methods of Dr. Pierre Janet of *la Salpêtrière*. The discussion on microcephalic idiocy is good, but it would have been better without the useless girding at the "Darwinians". The discussions all through are essentially physical. In the chapter on "Insanity of Children," we have somewhat more psychology, but it is not correlated systematically with the normal. There is no sustained attempt, as with Dr. Bevan Lewis, to analyse mental complexes or apperceptions. But the objective material contains many good observations and hints. This chapter and the succeeding chapter on sensory and mental deficiencies of idiots, suffer from the want of a vigorous separation of physical and psychical. The chapter on "Methods of Educating Idiots and Imbeciles" contains many first-hand hints on method—the time to begin training, the teaching of written and spoken words, the development of the senses, etc. Here functional analysis would be much to the purpose, as has been shown by Laborde's results with the microphonograph in the education of deaf-

mutes (*Treatment*, 27th Oct., 1898). The object of training is to produce a citizen, if possible; short of that, to make the idiot less of a social burden. This brings us to the legal chapters, which must end in questions of ultimate ethics. Did space allow, many other points might be profitably discussed. In a compound book like this, it is impossible to develop the detailed studies necessary to bring the psychology of idiots into line with the normal, and we may hope that Dr. Ireland will find time and energy to elaborate still more in the light of a fuller psychology his sketch of idiot education. The last chapter—on “Wolf Boys”—is essentially anecdotal, and does not pretend to more than historical interest. It remains to add that the book is written with great fluency, and has many indications of wide and liberal scholarship.

W. LESLIE MACKENZIE.

A Study of a Child. By L. E. HOGAN. New York and London: Harper Bros., 1898. Pp. x., 220. (\$2.50.)

Miss Hogan gives in this volume selected extracts from the diary of a boy's life, beginning with fragmentary first-year notes, and continuing into the eighth year. The topics followed out in greatest detail are language and drawing; the work is illustrated by over 500 drawings by the child.

Miss Hogan is herself more interested in Froebel and moral education than in psychology. Hence her extracts tend towards illustrations of discipline and conduct rather than towards a child psychology. Probably the original diary, drawings and cuttings have been preserved; they would be of greater service to the psychologist than the present book. Moreover the reader cannot be certain of the accuracy of all the recorded observations. ‘Receptiveness to sympathy’ is not to be dated from the second and third days; the average baby, at any rate, does not kiss its mirror reflexion at three and a half months, though it may try to get the whole image into its mouth; humour hardly appears at five months. Again, we are told that baby-talk was never employed (p. 5), while instances of baby-talk occur later on (pp. 40, 42, etc.). On 18th July of the second year we read: “He pronounces l in clock now”; on 20th October: “He pronounced l in clock for the first time, and then said it only once”. After the child has said ‘papa’ for some time (7th, 16th Nov.), we find that the author intended to say merely that the child *meant* ‘papa’; up to 23rd November he had actually said ‘baba’. ‘Ach, Himmel!’ is said on 24th November, and then, for the first time, on 14th December or later. A word explained on p. 55 is declared inexplicable on p. 63. It follows from all this that the work cannot be lightly used as a work of reference. The preparing of an index would have called the writer's attention to the many slips, and so have saved the reader much trouble. It would be advisable, too, should the book come to a second edition, to state the exact scale upon which the drawings and cuttings are reproduced. Anthropometric data are conspicuous by their absence.

On the other hand, the child psychologist will be grateful for this history of language development at large, and for the observations on instinctive fears, imitation, etc. Nor will he judge that all intrinsically improbable statements are wrong. The present reviewer can bear out the fact that “two voices, singing in parts,” will soothe a child who is deaf to the blandishments of a single voice: though accurate harmony is not essential! Miss Hogan's plan is quite worth carrying out; and if she has not done all that could be done by it, she has nevertheless obtained a good share of positive result, besides furnishing a model for future ‘child study in the home’.

Metaphysics. By B. P. BOWNE. Revised Edition. New York and London : Harper Bros., 1898. Pp. xiv., 429.

The first edition of this work was issued in 1882. Subsequent editions have been numerous, but no change has appeared in the text beyond a new preface, inserted in the fifth edition. In the present edition, the material is extensively rewrought in order to co-ordinate it with the author's *Theory of Thought and Knowledge* (reviewed in MIND, April, 1898). Method and standpoint remain substantially unchanged. The method is an elaboration of the categories, and the order of arrangement is the traditional one—Ontology (Being; The Nature of Things; Change and Identity; Causality; The World-Ground), Cosmology (Space; Time; Matter; Force and Motion; Nature), and Psychology (The Soul; Soul and Body; Mental Mechanism; Freedom and Necessity). The most important new matter is probably that contained in the general conclusion and in the discussions of evolution, nature and the supernatural, and freedom and necessity. The harmony of the author's theistic idealism with empirical methods in the sciences is emphasised by the frequent use of a new phrase, "phenomenal reality". The thought of the whole work is best summarised, perhaps, in these words: "Mind is the only ontological reality. Ideas have only conceptual reality. Ideas energised by will have phenomenal reality. Besides these realities there is no other. This is what is called my idealism. . . . It might be described as Kantianised Berkeleyanism. . . . Intelligence cannot be understood through the categories, but the categories must be understood through our living experience of intelligence itself. . . . This may be called my transcendental empiricism" (pp. 423-425).

The Groundwork of Science: a Study of Epistemology. By ST. G. MIVART. London: Bliss, Sands & Co.; New York: G. P. Putnam's Sons, 1898. Pp. xviii., 328. (6s.; \$1.75).

There seems to be a fatal novelty about the study of epistemology. Prof. Ladd has recently proclaimed himself a pioneer in the epistemological field; and Prof. Mivart thinks that a theory of knowledge is "greatly needed at the present time" and that it is worth while to make an attempt "to satisfy this rational desire". That there was an epistemology within the circle of the old Greek philosophy: that Locke and Leibniz are representatives of highly developed epistemological theories, the empiristic and the rationalistic; that Kant inaugurated a revolution in the science, by his appeal to the critical method; and that there are, at the present day, some half a dozen epistemological schools, each with its position well defined and its cardinal tenets embodied in easily accessible books and periodicals: of all this the reader of the present work will gain no idea. In place of such knowledge he has Prof. Mivart's own disquisitions, which are neither very original nor (what might compensate for lack of originality) very lucid.

The chapters of the volume deal with an enumeration of the sciences; the objects and methods of science; the physical and psychical antecedents of science; language and science; the intellectual antecedents of science; the causes of scientific knowledge; and the nature of the groundwork of science. The author's position is summed up as follows: "Only through the conception of an active causative principle, underlying and pervading the material cosmos, together with the recognition of the dignity of human reason, empowered as it is to perceive self-evident, universal and objective truths, can we understand the groundwork of science and attain to a final and satisfactory epistemology".

Essentials of Psychology. By C. S. BUELL. Boston : Ginn & Co., 1898. Pp. viii., 238. (\$1.10.)

This is an elementary psychology for high-school students. It consists of twelve chapters, the text of which is interspersed with problems and exercises. After an Introduction, occupied mainly with the nervous system and its relation to the mind, come four chapters on the senses. These are quite good, in spite of minor slips and inconsistencies (pp. 34, 43, 62, 64, 88, 94). Perception is then defined as the localisation and material reference of sensation. Attention is the intellectual power of focussing upon selected objects. Memory, imagination and thought are the three representative powers of mind, developing in this order. The book ends with chapters upon feeling and emotion and upon will.

While the later chapters are interesting as practical essays, they are conceived entirely from the standpoint of the faculty psychology, and are but loosely related to the sense analysis which precedes them. Attention is divorced from will, interest from feeling. The reader will therefore gain from the book no connected idea of psychology as a scientific systematisation of facts.

Comparing the work with others with which it challenges comparison, the present writer would rank it somewhat above Ladd's, but considerably lower than Titchener's *Primer*.

Theories of the Will in the History of Philosophy. By ARCHIBALD ALEXANDER. New York : Charles Scribner's Sons, 1898. Pp. viii., 357.

In the main this book is more occupied in giving résumés of the doctrines of leading philosophers than in tracing the general conditions which determine the evolution of thought concerning the Will. Greek theories are first discussed, with special reference to the antagonism between reason and passion. Then follow theories of the Will in Christian theology, in which the guiding points of view have reference to the prescience of God, the predestination of all events, original sin, and grace. This part of the work is especially interesting. From Christian theology the author passes to British philosophy from Bacon to Reid. Here, though the influence of theology is still marked, the purely psychological analysis of Will is the main feature. The following chapter discusses the development of continental views during the same period. As compared with British philosophy, purely psychological analysis takes a relatively subordinate position with these thinkers ; their special doctrine of Will is more determined by their general metaphysical systems. This is still more the case with the German theories from Kant to Lotze, which are dealt with in the last chapter. On the whole the book is likely to be useful, though it follows too closely the plan of the ordinary History of Philosophy, and though the exposition in some places lacks lucidity.

The Philosophy of Greece considered in Relation to the Character and History of its People. By ALFRED WILLIAM BENN, Author of *The Greek Philosophers*. London : Grant Richards, 1898. Pp. x., 308. (6s.)

"The object of this book is to show how Greek philosophy exhibits, under an abstract form, certain ways of acting and of looking at things which characterised the Greek genius before philosophy itself began ; how, having come into existence, its evolution was determined by the

history and geography of Greece; and how at every stage of that evolution it was influenced by the political, religious, and scientific culture of the Greek people ; in a word, to consider philosophy—by which I understand a study of the most general relations between the world and human life—as a product not only of certain pre-eminent intellects, but also and above all as a product of the nation whence they sprang" (Preface). Mr. Benn is specially fitted for the task he has undertaken, and the philosophy of the Greeks lends itself to such treatment in a peculiar way. Fuller notice will follow. We need here only say that the book is very able and very readable.

Les Origines de la Psychologie Contemporaine. Par D. MERCIER. Paris : F. Alcan ; Brussels : O. Schepens, 1897. Pp. xii., 486. (5 fr.)

Prof. Mercier is Director of the École Saint Thomas d'Aquin and of the Institut Supérieur de Philosophie at the Catholic University of Louvain ; and his book is naturally a contribution to Catholic philosophy. His main contention is that true philosophy consists in adhering to the fundamental principles of Aristotle and St. Thomas, and that the discoveries of modern science, and of experimental psychology in particular, will be found, if rightly interpreted, to contribute to the development of Neo-Thomism. The errors of modern psychology are traced back to Descartes and his conflicting doctrines of spiritualism and mechanism. From Descartes' spiritualism sprang an idealism which, under the influence of mechanism and sensualism, has resulted in the idealism characterised by agnosticism which prevails at the present day. As Descartes reduced psychology to the study of thought, so modern psychologists restrict their investigations to facts of consciousness. The study of metaphysics has been almost abandoned, and psychology is moving towards an idealistic monism. On the other hand, experimental psychology has begun to make rapid progress, and in this fact M. Mercier finds some hope for the future. After discussing the genesis of idealism and of the positive character which idealism assumed at the beginning of the nineteenth century, the author explains its inadequacy to solve the fundamental psychological problems, and proceeds to deal with the leaders of contemporary psychology. These are, in his opinion, Herbert Spencer in England, Fouillée in France, and Wundt in Germany. A long discussion of Mr. Spencer's views ends with the following remarks : "Spencer's metaphysics and his rational psychology in particular are characterised by this amalgamation of the various philosophical doctrines which emanated from Descartes and are diffused in the atmosphere of our century.... Spencer is a collector of ideas rather than the creator of a philosophy.... As for his doctrine of evolution, it is merely an analogy audaciously grafted on a hypothesis.... Every one will agree that in this vast conception there is neither science properly so called, nor true philosophy."

Having thus disposed of English contemporary psychology, M. Mercier turns to France and to Fouillée's theory of *idées-forces*. In Fouillée's *appétit* he finds an attempt at psychological unity and a vague apprehension of Aristotle's *έντελεχεία*; but here again idealism and positivism are predominant.

For Wundt there is more to be said. He is still enveloped in idealism ; he has not been able to break his Kantian fetters or to free himself from metaphysical agnosticism ; but he has the merit of declaring the reality of the data of experience, and in his doctrine of the will, though it is carried too far, he has made a stand against arbitrary *intellectualism*. "If Wundt could free himself from his idealistic and positivistic prejudices,

get rid of the false notion of substance which he has borrowed from Kant, and pursue in freedom the course which his personal researches indicate to him, he would be logically compelled to adopt the fundamental theories of Aristotle's psychology."

M. Mercier has set forth his own psychological doctrine in another work. In the present volume he contents himself with a chapter on "Psychology and Anthropology," in which he deprecates the arbitrary restriction which substitutes the study of the soul (*l'âme*) for the study of man as a whole. Three chapters are devoted to the criticism of idealism, mechanism and positivism, or agnosticism in metaphysics, and the concluding chapter deals with Neo-Thomism. In M. Mercier's opinion, the decadence of Scholasticism has been much exaggerated. Its revival in this century was brought about, not only by the need of combating the anti-christian philosophies of Germany and England, but also by the unsuccessful efforts made within the Church to find a refuge in Cartesian spiritualism or in ontologism. Since the Encyclical of Leo XIII., Neo-Thomism has made great progress within the Church. It has a prominent place in the teaching of the Catholic universities, and seven journals of Catholic philosophy have been founded since 1880. M. Mercier lays great stress on the importance of scientific and, in particular, of psycho-physical research, and charges all Catholics to meet their opponents by a diligent study of science, and a resolute adherence to Aristotelian and Scholastic philosophy.

The book is written for Catholics, and neither its arguments nor its conclusions are likely to commend themselves to readers outside the Church.

E. F. STEVENSON.

La Famille dans les Différentes Sociétés. Par C. N. STARCKE, Privat-docent à l'Université de Copenhague, Membre de l'Institut International de Sociologie. (Bibliothèque Sociologique Internationale, xvi.) Paris: V. Giard & E. Brière, 1899. Pp. ii, 276. (Broché, 5 fr.)

Dr. Starcke has already done excellent work on the primitive constitution of the family. The present book is ethical rather than sociological in its aim; but the author connects these two studies very closely. According to him we cannot know what life ought to be unless we understand what it really is and how it has developed.

The present work contains a full account of existing laws, customs and ideas concerning marriage and the family in the various nations of Europe, with sufficient indications of the changes which they have undergone in the course of history. In particular, the author brings out clearly the contrast between the modes of thought of the Latin and of the Teutonic nations. For the Latins, marriage is primarily an alliance between families, and the claims of the individual are with them subordinate. The Teutonic view is that marriage is primarily a social relation between individuals. Its essential purpose is the full development of the moral and intellectual life of the individual persons who enter into this most intimate of social unions.

It is the Teutonic point of view which Dr. Starcke himself favours. For him marriage is a means for self-realisation in the Hegelian sense. Thus his treatment of the question from an ethical point of view will be welcome and helpful to the prevailing English school of ethical thinking as represented by such writers as Muirhead and Mackenzie. The whole question of the position of woman and the transition which it is undergoing at the present moment is treated from this standpoint. No one can complain of a lack of chivalry in Dr. Starcke. He holds that women

under modern conditions are quite as well able to make their way in the world and in professional life as men. He is none the less of opinion that their more appropriate sphere is home life; but the reason is not any deficiency on their part as regards public life, but a positive capacity which they possess in a far higher degree than men of lavishing personal attentions. It is not because they are less fitted to face the world that they should prefer the home circle, but because they are more fitted for the duties of home life.

Dr. Starcke treats very fully the whole range of problems, moral and legal, connected with marriage and the family. We have not space to follow him here; we can only say that there is a great deal to be learned from his book, and that even where it is somewhat difficult to agree with him, he has much to say which is suggestive and valuable.

L'Éducation rationnelle de la Volonté; son emploi thérapeutique. Par Dr. PAUL-ÉMILE LÉVY, Ancien Interne des Hôpitaux de Paris. Paris : Félix Alcan, 1898. Pp. v., 284. (4 francs.)

To educate the will in a given direction is to give to a certain idea predominance in consciousness which will make it efficient in determining conduct. The sole means of producing this result is concentration of attention on the idea. The special feature of Dr. Lévy's book is that he lays stress on certain peculiarly effective methods of attaining this end. He takes his cue from the power of suggestion in hypnosis and similar states. But the education of the will which he has in view is not education by external suggestion, but self-education by auto-suggestion. For instance, he recommends that the patient should withdraw into quiet and solitude, and then compose himself as if for sleep. At the moment when he is in the transition state between sleep and waking he should bring before his mind as vividly as possible the idea of himself as acting in a certain way, or as undergoing some change of bodily condition, and not merely the idea but the definite affirmation that he is going to act in this way or to undergo this change. Dr. Lévy says that he himself can pursue this method with success, and that he has found it efficacious in the case of many patients. Of course an idea dwelt on under these conditions will attain a controlling force and dominance simply because it has the field to itself, the mind being in other respects dormant. This procedure is not only an education of the will, but also in many cases a cure for bodily diseases. The general state of the organism depends to a very large extent on that most important member of the organism, the brain; and so far as this is the case Dr. Lévy's method supplies a means of altering the condition of the body; for according to the principle of psycho-physical parallelism, psychical change involves cerebral change, and cerebral change in its turn determines other organic states. Dr. Lévy gives a number of cases of such cures. Insomnia, tendency to fainting-fits, paresis, trance, trembling, various kinds of pain such as headache and toothache, disorders of circulation and respiration, want of appetite, constipation, etc., have yielded in his experience to treatment by auto-suggestion. Of course the efficacy of the treatment has definite limits, but it seems that it is capable of successful application in a large class of cases. Whatever may be the value of Dr. Lévy's results to the medical man, they are certainly very interesting to the psychologist.

La Notion de Temps d'après les principes de Saint Thomas d'Aquin. Par DÉSIRÉ NYS. Williams & Norgate, 1898. Pp. 228.

The concept of time is at once amongst the most familiar and the most obscure of concepts. "What is time? If no one puts that question to

me, I know what time is. But if the question be put, I find that I do not know." So wrote St. Augustine. A complete study of the notion of time comprises two fundamental questions, the psychological question as to the genesis of the idea of time, and the ontological question as to the objectivity of time. Viewed from the ontological standpoint, the theory of St. Thomas, as set forth in his various opuscula, notably in the opuscula 'de tempore,' and 'de instantibus,' may be described as moderate realism. Time has at once its objective and its subjective character. Abstracted from continuous movement, time possesses in movement a real being. Nevertheless, movement is not time, nor can it become time without the concurrence of mind which breaks up its continuity, and reunites in a same whole the divers parts which it distinguishes there. Taken in its totality then, the concept of time designates a real, but essentially fugitive being, the present, and elements which, as such, have only an ideal reality, the future and the past. Hence the objective and the subjective character of time. Such, at least, is the theory of St. Thomas. In opposition to this moderate realism of St. Thomas stand, on the one hand, the idealistic and subjective theories which unduly deprecate, or even entirely suppress, the objective reality of time, and prominent amongst these are the theories of Kant, Leibnitz, Balmes, Descartes, Baumann, Locke, and Spencer; and, on the other hand, the theories characterised by an exaggerated realism, and among the better known of these are the theories of Gassendi, Newton, and De San. The earlier and longer portion of M. Nys' very able treatise is devoted to an exposition and defence of the system of St. Thomas. The latter portion explains the various rival systems, and criticises each in detail. M. Nys' criticism of the Kantian system seems to be particularly good.

Essai d'une Philosophie Nouvelle Suggérée par la Science. Par LÉONCE RIBERT. Paris: Alcan, 1898. Pp. 562.

By far the greater part of this work is taken up with a naïve narration of the mythology of modern science, untroubled by criticism and with hardly a suspicion of the true nature of the problem which the sciences bequeath to philosophy. Its only novelty is found in the occasional introduction of a cosmological myth of the author's own (e.g., p. 509), and in his substitution for the usual 'Force' of an "infinite potentiality" (*virtualité*), described as a principle of activity and supposed to generate all things by its conjunction with 'Matter'. But such divergences are neither emphasised nor fully worked out, and the general impression left by the book is that its author has a mind of the type which in England finds full satisfaction for its intellectual needs and spiritual aspirations in the writings of Mr. Herbert Spencer. Accordingly M. Ribert, whose amiable character is plainly mirrored in his work, is exceedingly well pleased with his conclusions, and cannot conceive how any one could wish for anything more. Hence he is much distressed and puzzled by the symptoms of soul-sickness he detects around him, and by the pessimistic way in which the 'gospel of Science' has been received by many of the finest intelligences of France. His failure to understand why his nostrums should arouse only nausea in such minds and why people should talk about 'the bankruptcy of science,' sufficiently indicates his limitations. It should, however, be admitted that his claims are modest and that the preface stamps the book as *un ouvrage de vulgarisation*—a phrase which the English reader is unfortunately too often tempted to translate literally. Yet the style is good and the narrative flows in a smooth and sparkling stream of lucid French; only it will not be found navigable for ocean-steamships.

L'Illusion de Fausse Reconnaissance. Contribution à l'étude des conditions psychologiques de la reconnaissance des souvenirs. Par le Docteur ÉUGÈNE BERNARD-LEROY. Paris : Félix Alcan, 1898. Pp. 249. (4 francs.)

Treats of the not uncommon experience in which a situation or group of circumstances or events appears to a person as if he had already been confronted with them in the past. The main value of the work lies in the collection of eighty-six cases, thirty-six published previously to the present work, and the rest gathered by the author himself in answer to question-forms very carefully drawn up. Dr. Bernard-Leroy brings out very clearly the distinctive features of the illusion. He fails to find that it is dependent on any special bodily or emotional conditions. Various attempts at explanation are criticised and easily disposed of. Among these the author does not take account of the suggestion of Havelock Ellis that the false recognition is an inverted hallucination, in which the sensory centres "receive an actual external sensation in the feebler shape of a representation" (*MIND*, New Series, vol. vi., No. 22, p. 286). It is true that Havelock Ellis connects this with nervous fatigue in the subject, and Dr. Bernard-Leroy has apparently shown that this is by no means a frequent accompaniment of the illusion. None the less, it may well be that the true explanation is to be sought on some such lines as those suggested by Dr. Ellis. The assumption that the inverted hallucination is due to fatigue seems to constitute no essential part of his theory. The author's own explanation can scarcely be regarded as an explanation at all. He simply says that recognition is accompanied by a feeling which is difficult to analyse, and that this feeling sometimes arises abruptly when the experience with which it is connected has not existed before. This amounts to nothing more than a restatement of the fact to be explained.

System der Werttheorie. Band i., "Allgemeine Werttheorie, Psychologie des Begehrens". Band ii., "Grundzüge einer Ethik". Von Dr. CHRISTIAN von EHRENFEIS, Professor der Philosophie an der deutschen Universität in Prag. Pp. xxiii., 277, viii., 270. London : Williams & Norgate, 1897, 1898.

This is a systematic treatise on the idea of Value, regarded as the Basis of a complete ethical theory. Some account has already been given in *MIND* of the point of view represented by the writer (see New Series, No. 16, pp. 425-449). The present work, however, is considerably more comprehensive than any of the previous discussions either by him or by Meinong, and in particular the bearing of the theory of value upon definitely ethical doctrines is more fully brought out than it has probably ever been before. Critical notice will follow.

J. S. M.

Principi di Psicologia Moderna criticamente esposti. Da A. FAGGI. Pp. iv., 134. Palermo : Alberto Reber, 1897. London : Williams & Norgate.

This book is the second part of Prof. Faggi's *Principles of Psychology*, the first part of which was published in 1895. It is not a manual of psychology, but, as its title announces, a critical exposition of certain leading principles. The author's object is to make students acquainted with the methods of modern psychology and its most important problems, and, especially, to show the application which has been made and that

which, in his opinion, can be made of psycho-physical parallelism and the law of association. Prof. Faggi anticipates a possible criticism by remarking that, since scientific analysis has made most progress in the region of sensations, he has necessarily devoted more space to this subject than to the higher functions of consciousness. The book is too short and written too much from the critical standpoint to be an exposition of the author's own views. It contains four chapters, or, rather, four separate essays on Time and Space, Association and Apperception, Feelings and Emotions, Perception and Self-consciousness. In each case Prof. Faggi indicates the nature and the difficulties of the problem he is about to discuss, states briefly the views of various psychologists, makes comparisons and raises objections and, to some extent, explains the theory which he himself prefers. The reader's attention is drawn chiefly to the psychology of Wundt, Külpe, Ziehen and James, and the differences between them are clearly brought out.

In a fifth and concluding chapter, entitled "Epilogue and Prologue," the author explains his general psychological attitude. The science of psychology, by the adoption of general principles, of which psycho-physical parallelism is the most important, has passed from the descriptive to the explanatory stage. Since all facts of consciousness are, as such, qualitatively diverse, the law of association can only hold good as a principle of psychological explanation if it is regarded as a manifestation of physical laws. Movement and sensation are irreducible and incommensurable. Consciousness is the limit of the *natural* knowledge of phenomena; and on this side there can be no science, but only narration and description. To say this is not to advocate materialism. Physiology is concerned with organic functions in general, psychology with only those which have a psychical correlative; and thus the two sciences overlap. "In spite of what Wundt himself may say to the contrary," Prof. Faggi remarks, "I maintain that the only scientific interpretation of his theory of apperception is the psycho-physical interpretation given by Külpe." The psycho-physical point of view is, in fact, the psychological point of view. Psychical processes are conditioned by material changes in the organism; but, since the opposition between matter and spirit is not real, but created by thought, the principle of parallelism is purely "regulative," and its interpretation has no scientific value. But the world of science is not the world of consciousness; and "psychical materialism," as Prof. Faggi calls it, so far from being inconsistent with idealism, is rather a starting-point from which to arrive at it. "For the exigencies of practical life we need the existence of the Absolute, but Science can do nothing for this need except ascertain its physiological and psychological conditions."

The book is clearly and concisely written, and should prove helpful and suggestive to students who have some elementary knowledge of psychology.

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Annual Report of the Smithsonian Institution, 1896, Washington, 1898, pp. li., 727.
F. Pollock, *Spinoza, His Life and Philosophy*, second edition, London, Duckworth & Co.; New York, The Macmillan Company, 1899, pp. xxiv., 427. (8s.)

- F. Hueppe, *The Principles of Bacteriology* (translated by E. O. Jordan), Chicago, The Open Court Publishing Company; London, Kegan Paul, Trench & Co., 1899, pp. x, 467. (9s.)
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- H. Fierens-Gevaert, *La Tristesse Contemporaine*, Paris, Félix Alcan, 1899, pp. iii, 195. (2 fr. 50.)
- L. Lévy-Bruhl, *Lettres inédites de John Stuart Mill à Auguste Comte*, Paris, Félix Alcan, 1899, pp. xxxviii, 557. (10 fr.)
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- G.-L. Duprat, *L'Instabilité Mentale*, Paris, Félix Alcan, 1899, pp. 310. (5 fr.)
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- K. Groos, *Die Spiele der Menschen*, Gustav Fischer, 1899; London, Williams & Norgate, pp. iv, 537. (10s.)
- O. Siebert, *Geschichte der neueren deutschen Philosophie seit Hegel*, Göttingen, Vandenhoeck & Ruprecht, 1898; London, Williams & Norgate, 1898, pp. vii, 496. (7s. 6d.)
- P. Salits, *Darstellung und Kritik der Kantischen Lehre von der Willensfreiheit, mit einem geschichtlichen Rückblick auf das Freiheitsproblem*, Rostock, 1898; London, Williams & Norgate, pp. 195.
- G. Villa, *La psicologia contemporanea*, Fraletti Bocca; London, Williams & Norgate, 1899, pp. 15, 660. (14 lire.)
- S. Fragapane, *Della Filosofia Giuridica nel presente Ordinamento degli Studi*, Roma, 1899, London, Williams & Norgate, pp. 38.
- M. Panizza, *Le Tre Leggi*, Roma, E. Loescher & Co., 1899, pp. 222. (4 lire.)

VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. vii., No. 6. **J. Seth.** ‘Scottish Moral Philosophy.’ [Inaugural lecture at Edinburgh. The three stages in Scottish ethics: Hutcheson, Hume, Reid. Hutcheson combats the egoism of Hobbes and Mandeville. Goodness is inherently beautiful; the mark of virtue is disinterestedness; its essence is positive benevolence. Hutcheson “is the founder, in Scotland at least, of Scottish intuitionism in ethics”. Hume combats the rationalism of Cudworth and Clarke. He tries to reduce all the deliverances of the moral sense to the single principle of sympathy (*Treatise*), though he finally gives up the attempt to account for sympathy itself (*Inquiry*). He furnishes the classic statement of English utilitarianism; his analysis of sympathy brought out Smith’s theory of the moral sentiments; his ethics, like his metaphysics, was answered by Kant. Reid combats Hume, and establishes the common-sense philosophy. “When it left Reid’s hands, the intuitional theory of ethics was finally stereotyped.”] **E. P. Robins.** ‘Modern Theories of Judgment.’ [The English philosophers have insisted that we know reality (Locke, Reid, Bradley); the German, that knowledge is a mental construction, but that there is a reality behind the appearance of the world (Kant, Lotze, Sigwart). Bosanquet gives the synthesis: “he maintains that knowledge is of reality . . . and vindicates the synthetic activity of thought,” holding that knowledge is an intellectual construction. This is the right view. “Mind is an activity of judgment from the first, and in its earliest experience knows reality, and is never the spectator of passive states as such.”] **J. D. Logan.** ‘Psychology and the Argument from Design.’ [The three phases of modern teleology. God made the world out of nothing; made it out of crude matter, by an original act of design; created it by an act of design, and thereafter continually sustains its finality. Criticism leads to the conclusion that “both objectively and subjectively [there is] no conscious design apart from previous immanent, unconscious design; only novel situations and repeated experiences.”] **H. M. Stanley.** ‘Space and Science.’ [Space is “appearance produced by the individual dynamic repulsiveness by which the thing consists and exists. . . . Everything makes its own spaciousness by its own offensive and defensive force.” “The mutually exclusive nature of dynamism gives the space effect.” A phenomenon of the inner and finite life of the infinite, it may, “as a general mode of the activity of the whole, be termed infinite.”] Discussions. **J. M. Baldwin.** ‘Social Interpretations: a Reply.’ **J. Dewey.** ‘Rejoinder.’ Reviews of Books. Summaries of Articles. Notices of New Books.

PSYCHOLOGICAL REVIEW. Vol. v., No. 6. **G. T. W. Patrick.** ‘Some Peculiarities of the Secondary Personality.’ [Experiments on simple automatisms are needed. Characteristic of the secondary personality are suggestibility, fluency, lack of reasoning power, heightened memory, power of constructive imagination, vulgarity or mild profanity, profession of ‘spirit’ identity and supernormal knowledge, and, occasionally,

brilliant intuition. All these traits remind us of the primitive mind. Records of cases.] **J. R. Angell.** 'Studies from the Psychological Laboratory of the University of Chicago.' **J. R. Angell, J. N. Spray, E. W. Mahood.** 'An Investigation of Certain Factors Affecting the Relations of Dermal and Optical Space.' [(1) Skin lines (volar forearm) are underestimated as compared with horizontal visual lines. This underestimation decreases within limits with increasing pressure. (2) It is diminished by the introduction of temperature, becoming overestimation when the stimulus is distinctly hot or cold.] **M. L. Ashley.** 'Concerning the Significance of Intensity of Light in Visual Estimates of Depth.' [Monocular and binocular experiments, with simple and ingenious apparatus. Intensity "has been found of marked importance, even where accommodation, convergence, size of retinal image and disparateness of retinal images could enter to oppose it".] **F. B. Sumner.** 'A Statistical Study of Belief.' [Results of questionnaire of twenty-five topics, covering 'nearly every general class of subjects upon which the average person forms opinions'. Results: a graded arrangement of beliefs is possible and real. Characteristic differences appear between the sexes, and between those who have and those who have not had psychological training.] **G. M. Stratton.** 'A Mirror Pseudoscope and the Limit of Visible Depth.' [Description of a simple and practical mirror pseudoscope. Limit of visible depth is at least as remote as 580 m. The inequality of retinal impressions is here 24"; points have never been distinguished when separated by less than 30". The present result is due to the persistent efficiency of subliminal motives (visual images and orbital sensations).] Discussion and Reports. **H. Muensterberg.** 'The Psychology of the Will.' [Defence of *Die Willenshandlung* against Pfaender and A. Seth.] **E. Thorndike.** 'What is a Psychical Fact?' [Against the position of Muensterberg and Royce that the mental fact is individual and incomunicable, and therefore unmeasurable.] **A. C. Armstrong.** 'Consciousness and the Unconscious.' [Mental life is a thing of degrees in the scale of complication. Hence we should do well to speak of psychoses of the first, second, etc., power or potency.] **E. E. Slosson.** 'A Case of Retarded Paramnesia.' **E. A. Kirkpatrick.** 'Memory and Association.' [Comment on Miss Calkins' Wellesley study.] **J. McK. Cattell.** 'The Psychological Laboratory.' [Critique of Titchener, French and Scripture.] Psychological Literature. New Books. Notes.

Mon. Suppl., No. 7. **W. Lay.** 'Mental Imagery, Experimentally and Subjectively Considered.' [A somewhat rambling and unsystematic paper, whose chief value lies in a number of acute introspective records scattered through it. The author uses 'mental imagery' in a sense which excludes active imagination, memory and after-image. He performed five sets of experiments. (1) Passages were read aloud to college classes, and by them reproduced; visual imagery proved to be the chief means of reproduction, the auditory coming in 'to help' when the visual did not arise. (2) Questionnaire submitted to artists and sculptors; no extraordinary visualising power found—"some painters seem to have the imagery developed but little". (3) Consonants were counted and classified in passages from Tennyson, Browning, Swinburne, etc. (4) Images aroused in the author's mind by the reading of Tennyson and Browning were counted and classified. (5) Introspective record, extending over two years (2500 images): visual, 57·4 per cent.; auditory (including words), 28·76 per cent.; smell, 5·88 per cent.; taste, 0·58 per cent.; temperature, 2 per cent.; touch, 3·84 per cent.; organic, 1·1 per cent.; motor ('internal touch'), 0·32 per cent.; emotive, 0·12 per cent.;

pain, 0. The high percentage of olfactory images is noticeable. No evidence is brought for the existence of the emotive type: the single instance offered tells directly against it. There follow an analysis of the writer's word imagery, and a historical note on the literature. A final section criticises the questionnaire method; emphasises the value of imagery, as our means of realising meaning in symbols (words), and as a source of pleasure in reading poetry; and raises the questions of image training, and of discrimination of mental types.]

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. x., No. 1. **L. W. Kline.** 'The Migratory Impulse *v.* Love of Home.' [A good, but unnecessarily long paper. Introduction: factors of psychical differentiation are those inherent in the life-principle, and the cosmic and social. Example: relations of life to temperature shown by experiments on tadpoles. Questionnaire returns; attunement of life to cosmic and social forces has led to a rhythmisation of the life processes. Chapter i., Migration of Animals. Summary of observations and theories. Chapter ii., Migrations of Primitive Man. Ethnological views: illustrations of planomania. Results: animal migration is determined by the procreative function, modified by cosmic forces; human migration by more complex conditions,—climatology and the cosmic periodicities of the procreative function playing a large part. Chapter iii., Love of Home. Elements analysed from questionnaire returns. Conclusion: the migrant is cosmopolitan, variously interested, plunged in daring and speculative pursuits; the lover of home is provincial, plodding, timid, conservative.]

E. A. McC. Gamble. 'The Applicability of Weber's Law to Smell.' [A strong piece of work, whose condensation and reserve contrast favourably with the foregoing. Work upon thirteen subjects, with thirteen liquids and seventeen solids, by Zwaardemaker's olfactometric method: measure is amount of odorous surface exposed, time of exposure may be disregarded, diffusion-rate of vapour is under control, subject's breathing is self-regulating. Method of just noticeable differences employed, and tested by minimal changes and right and wrong cases. Constant errors: adhesion, exhaustion, movement, unmeasured increment of stimulus. Results: the difference limen was $\frac{1}{2}$ in 36 per cent. and $\frac{1}{4}$ in 26 per cent. of all determinations. It was $\frac{1}{2}$ in 12 per cent., $\frac{1}{3}$ in 12 per cent., more than $\frac{1}{2}$ in 5 per cent., and no less than $\frac{1}{2}$ in 9 per cent. It follows that the law applies to smell, and that the difference limen lies between $\frac{1}{2}$ and $\frac{1}{4}$.] **E. B. Titchener.** 'Minor Studies from the Psychological Laboratory of Cornell University,' xvii. **D. R. Major.** 'Cutaneous Perception of Form.' [Work with open angles, triangles, circles; filled triangles and circles. Surfaces tested—tip of tongue, tip of finger, lips—rank in that order. Open circle is most easily, filled circle least easily cognised. Liminal open circle has a diameter of about 2 mm.] Psychological Literature. Correspondence. [Lukens on E. Gates' Laboratory.] Notes and News.

REVUE PHILOSOPHIQUE. January, 1899. **F. Le Dantec.** 'Les Néo-Darwiniens et l'hérédité des caractères acquis.' [A long article passing in review the various theories of human generation which have been propounded. Those of Buffon, Darwin and Weismann are condemned as being lineal descendants of the old encasement theory. The writer supports the hypothesis advanced by the bio-chemical school.] **E. Boirac.** 'Les Phénomènes Cryptoides.' [The central postulate of human science is that things exist in order to be known. Up to Descartes' time it was generally held that the senses are adequate to give us a complete knowledge of things. This belief is not yet dead. We still regard 'phenomenon' as synonymous with 'natural fact' or 'event'. Science,

however, is gradually reverting to the Baconian distinction between 'ostensive' and 'clandestine' instances. Two sets of causes have drawn attention to the latter: (1) the extraordinary discoveries of the latter half of the century, e.g., Pasteur's discovery of microbes, the Röntgen rays; (2) influence of the philosophical thought of Descartes, Leibnitz and Kant. The rest of the article is devoted to an examination and classification of the said 'cryptoid phenomena'.] **A. Schinz.** 'Le Positivisme est une méthode et non un système.' [Object alike of philosophy and of science is explanation. We *explain* a phenomenon when we determine its cause or causes, meaning by 'cause' necessary antecedent. Two kinds of causal relation are conceivable: (1) between phenomenon and phenomenon; (2) between the absolute and phenomena. (1) is 'natural,' (2) 'metaphysical'. Corresponding to these are the positive and metaphysical methods. The former alone can give us true knowledge, but our ignorance often forces us to use the latter.] *Revue Critique*. Tolstoi et la question de l'art. Analyses et comptes rendus, etc. February, 1899. **J.-J. van Biervliet.** 'L'homme droit et l'homme gauche (1).' [The writer having been led to investigate sensibility of right and left side respectively and concludes that there are two distinct normal asymmetric types—'l'homme droit' and 'l'homme gauche'. The former is the more frequent; in the latter the left hand is not always the more adroit but it is the stronger, and the sensibility of the sense organs on the left side of the body is more acute than those on the right. The rest of the article consists of a detailed examination of the *motor system* of these two types.] **Th. Flournoy.** 'Genèse de quelques prétendus messages spirites.' [An analysis of two cases of "automatic writing," in both of which the writer was deceived; in both cases the suggestion can be explained as coming from the sub-consciousness of the individual writing; hence to assign it to any other cause is to violate the methodological principle prohibiting the unnecessary multiplication of causes.] **P. Tannery.** 'La Stylo-métrie: ses origines et son présent.' ['Stylometry' means the statistical analysis of peculiarities of style. Employed by Prof. Lewis Campbell with a view to discovering the chronological order of Plato's dialogues. Name coined by M. Lutoslawski. This method may have a future, but as hitherto formulated is too vague to be used scientifically.] *Revue générale. Les Travaux Recents de Psychophysique. Analyses et comptes rendus, etc.* March, 1899. **H. Bois.** 'La Conservation de la Foi (1).' [Answer to 'La Dissolution de la Foi,' by M. Dugas in September number of the Review. Starts with exposition and criticism of 'religious formalism' given by M. Dugas. The supporters of this theory maintain that we must distinguish two elements in religion: (1) its form or spirit—which is eternal; (2) its matter or content—which is temporary. Hence, from this point of view, all religions are false and all are true. Essence of all is the adoration, under the name of God, either of the order of the Universe, or the Reason which witnesses to itself all round us, or human reason. M. Bois entirely rejects theory. Truth is never relative. God is not a category, but a concrete person, known by us as concrete persons, and not by any special religious faculty. Miracles must be conceived as the special operation of the free personality of God making use of, though not violating, natural laws. Catholicism is against reason; Protestantism is conformable to it.] **A. Fouillée.**

'La Psychologie Religieuse dans Michelet.' [Reviewing Michelet's *Le Prêtre, la femme et la famille* and *Les Jésuites* writer points out that he rightly apprehended the importance of the psychological laws of 'habit' and 'suggestion' in forming character, quotes with approval his exposition of the dangers of auricular confession, his conception of the vocation of

woman, and his attack on the Jesuits. Goes on to consider present situation of Catholicism which is characterised by a change of attitude towards (1) philosophy, (2) socialism.] **J.-J. van Biervliet.** 'L'homme droit et l'homme gauche (II.)' [The asymmetry of the *nervous system*.] *Revue générale. Les travaux récents de psychophysique (conclusion). Analyses et comptes rendus, etc.*

REVUE DE MÉTAPHYSIQUE ET DE MORALE. September, 1898. **E. Chartier.** 'Commentaire aux fragments de Jules Lagneau.' [This concluding article assigns to metaphysics three guiding ideas. First, the idea of truth; that which no mind can refuse to admit, that which is necessary. Secondly, the idea of a nature that is thinking, absolute, universal and necessary. The third belongs to method, the idea of *reflective analysis*. This is described as the search for necessity by simple and clear definitions and rigorous demonstrations, in short, mathematics in an extended sense.] **A. Lalande.** 'Le langage philosophique et l'unite de la philosophie.' [After expounding the excellence of the end, the unity of philosophy, and assigning the causes of the existing discord, the author is sanguine enough to suggest as the means towards realising his ideal (1) individual research animated by the love of unity; (2) permanent collaboration, say by academies and societies; (3) international conventions; (4) reconstruction of the system of education. The functions of a philosophical society such as would carry on this good work are the revision of the philosophical vocabulary, and the publication of an elementary course of Philosophy. The terminology should be reformed by definitions, both historical, to give the meanings employed by the leading writers, and dogmatic, to fix future use.] **Elie Halévy.** 'Quelques remarques sur la notion d'intensité en psychologie.' [Intensity appears in mental phenomena attached to sensation and to belief. Intensity of belief is measured by a fraction whose numerator is the number of reasons for the belief, and whose denominator is the total of reasons for and against. Though the mathematical measure is thus limited by the two extremes 0 and 1, the psychological value may range from nothing to the indefinitely great. This arises from the infinite number of conditions determining everything concretely given in our experience. Hence we conclude that intensity of belief is not a simple subjective element, but complex, the result of a reflective act. With regard to intensity of sensation, though a confused state of consciousness, yet psycho-physics measures it and assigns to it its laws. The well-known law connecting increment of excitation with increment of consciousness has its limitations and exceptions. The analogy between sensation and belief, in intensity, may be illustrated thus: If in a central telegraph station the wires bring in one after another intelligence that a certain event has happened, the belief of the receiver of the messages in the truth of the news rises rapidly to the highest pitch of intensity. So, too, in sensation; its intensity increases with the number of conditions of production involved. Thus intensity of sensation is also removed from the number of simple mental elements. The lesson drawn, in conclusion, is that the true method of psychology is to decompose, to analyse the synthesis already made by intelligence.]

REVUE-NÉO SCOLASTIQUE. No. 19. **C. Besse** ('Léon Ollé-Laprune,' *suite et fin*) decides that the philosophy of Ollé-Laprune is essentially a will-philosophy. Will and action lie at the root of everything. There is an element of will in the operations of mind. When I perceive, I attend. But what is attention but an act of will? When I judge, I issue from uncertainty and hesitation; I decide between things compared. How is this possible without an act of will? Much more is will needed in the

higher functions of knowledge. Very few things are evident and these are chiefly of the ignobler kind. We must affirm them more than we see. To affirm without sufficient reason more than we see is an act of rash credulity. But to affirm more than we see, with good reasons for our belief, is an act of wisdom. It is not, however, an act to which nature constrains us. It postulates the presence of good will. **E. Pasquier** ('Les hypothèses cosmogoniques,' *suite et fin*) discusses the hypotheses of Faye, Ligondès, and Braun. He believes that in some respects the hypothesis of Faye is superior to that of Laplace, and agrees with Wolf as to the modifications which Laplace would introduce into his hypothesis in the actual state of science. **M. de Wulf** ('Qu'est-ce que la Philosophie scolaistique ?' *suite et fin*) who, in a previous article had rejected various extrinsic definitions of scholasticism, now sets aside as false, or at least incomplete, certain intrinsic definitions of that system. **A. Thiéry** ('Qu'est-ce que l'art ?') sets before us the views on art that have been lately published by Count Léon Tolstoi. Tolstoi identifies beauty with pleasure. To consecrate art then to the service of beauty is to consecrate art to the service of pleasure. But this is to assign an ignoble end to art. Art must then be emancipated from the service of beauty. What then is the aim of art ? It is "the realisation of the fraternal union of men". This is the only true aim of art. But if art be the means of uniting men, it must appeal not to a class, but to all. It must be simple then, so that he that runs may read it. What, then, of the Ninth Symphony of Beethoven ? "It is not a work of art," boldly answers Tolstoi.

L'ANNÉE PSYCHOLOGIQUE, iv. Paris : Schleicher Frères, 1898. Pp. 849. The original papers, twenty-five in number, occupy rather more than half of the volume. The first twelve contain a report of two series of experiments by **A. Binet** and **N. Vaschide**, which have for their aim (1) the measurement of various physical properties of the individual, (2) the investigation of the correlations of these properties. It is explained that the latter investigation has hitherto received but little attention as compared with the former, and the authors do not profess to have made more than a first essay in it. The experiments were carried out with two groups of subjects, the first composed of boys in a primary school (average age thirteen), the second of youths in a training college for teachers (average age seventeen), and there were about forty subjects in each group. In a preliminary paper the authors explain their reasons for selecting the primary school as the sphere of their experiments. It has various drawbacks which limit the character of the experiments, but, on the other hand, it has the two great advantages of numbers and discipline. The importance of these two points is illustrated by an amusing description which the authors give of their troubles with voluntary subjects in a private gymnasium. The following notes may serve to give some indication of the questions investigated and the methods used. The first set of experiments in the primary school was directed to testing the muscular strength and endurance of the boys, a number of different tests being employed. In connexion with the test by means of hand-pressures, the authors find different types of endurance, *e.g.*, a type in which the force exerted remains fairly steady, a type in which it diminishes continuously, a type in which it diminishes rapidly and then remains steady. The influence of rivalry is also studied, and, finally, the various tests are correlated with a view to determining which is the most representative. The second set of experiments, "*épreuves de vitesse*," includes the following tests: Reaction times, both simple and discriminative; running; rapidity of marking a series of dots on paper. As might be expected, the results of experiments so different in character

show little connexion with each other. In the reaction experiments, the authors emphasise the importance of observing the subject during the experiment. For instance, in the case of a subject who has to check a tendency to anticipation, the reaction time may be lengthened if the signal comes just when he is thus restraining himself. The next set of experiments is concerned with respiration and circulation. In the circulation experiments, the authors bring out the interesting result that, unlike such exercises as running, which accelerate circulation, a brief and intense localised effort diminishes it quite appreciably. After a summary of various anatomical measurements, there follows a paper in which the authors indicate briefly the extent of the individual differences revealed in the various experiments. And the final paper of the first series deals with the correlations of the various tests taken together, two additional tests of a more intellectual character being included, one a memory test, the other that of the scholar's place in class. Two methods are employed in the study of the correlations of the tests. The first is that already employed in correlating the different tests within each set of experiments. It consists in classifying the subjects into four groups determined by some standard test (five such tests are taken), and then comparing the results of other tests in relation to this classification. The other method (*méthode du rang*) is based on a comparison of the places held by the same subject under different tests. In dealing with a group of subjects, it may be employed to determine either the mean of individual differences of place or the difference between the average places of the group under different tests. The method, however, is not here applied with reference to standard tests, but with reference to what the authors call a "*classification globale*" of the scholars. This classification is arrived at by adding together the places held by the individual scholar under all the physical tests (the more intellectual tests are excluded), so that the scholar whose sum of place-marks is lowest stands at the head. The scholars are then, by means of this classification, divided into four standard groups, and the method in both its forms is applied with reference to these. The interesting result is brought out that two of the respiration tests are decidedly the most representative for the complex of physical qualities investigated. The series of experiments carried out with the pupils in the training college was similar in character, and the parallelism gives an interest to the second series. Of the remaining papers, several of those written by the authors above named are more or less directly connected with the foregoing experiments. In two papers the authors examine possible sources of error in certain instruments used, *viz.*, the pressure instrument or dynamometer and Mosso's ergograph. In a third paper they describe a new and improved form of ergograph in which a spring is substituted for the weight used in Mosso's instrument. In other papers they study some of the physiological aspects of the experiments. For instance, in a paper on muscular contraction, they find a rather striking difference in the sorts of fatigue produced by those experiments with the ergograph, which are directed to testing '*force*' and '*vitesse*' respectively. In the former experiment (in which a heavier weight is used), fatigue is expressed in an inability to contract the finger which lifts the weight; in the latter experiment (in which a lighter weight is used), fatigue is expressed in precisely the opposite effect of a state of contraction. Two other papers by the same authors separately deal with certain aspects of the effect of intellectual work on bodily functions. A final paper (by **B. Bourdon**) gives an account of recent work upon the visual perception of depth. The second half of the volume is occupied by the Bibliography, which includes classi-

fied notices of recent works and a classified Index of recent publications and articles.

L'ANNÉE PHILOSOPHIQUE (1897). Paris : Félix Alcan, 1898. Pp. 316. The first article, by **M. Renouvier**, is entitled 'De l'idée de Dieu'. The author criticises the first principles of various religious and philosophical systems, and his conclusion is that the principal doctrines of the theology of Thomas Aquinas "have exercised an influence over modern Philosophy, down to the time of Kant, upon the *a priori* school, in all that relates to the Divine Nature. This Philosophy (*i.e.*, that of Aquinas), essentially infinite and predeterministic, has overwhelmed the *positive idea of God* by definitions of attributes and powers which are peculiarly appropriate to the *realistic idea of the Universal*." The same neglect of the "positive idea of God" continues after Kant, and **M. Renouvier** has some caustic criticism of Hegel, Schopenhauer, and Spencer. With regard to the latter, **M. Renouvier** forcibly contends that "the proof of the Relativity of Knowledge is, in precise terms, consecrated to the establishment of a certain number of Absolutes" (p. 27). Therefore, the dominant note of Philosophy during the present century is, either explicitly or implicitly, the maintenance of the Absolute, which is declared to be mere "latent Atheism". In reference to this, **M. Renouvier** speaks in no measured terms of Hegel. "What an infirmity of outlook, compared to the teaching of the Ancients! For God to reach His accomplishment in man, in the person of a philosopher—in that of Hegel, perhaps! Truly this is to give the idea of God a beggarly realisation!" (une réalisation trop pauvre). Passing the many historical difficulties in **M. Renouvier's** criticism, one, not unnaturally, expects some remarkable excellence in "the positive idea of God," which is described as the supreme realisation of the ideal of personality—intelligence, will, design, and moral perfection. But how is the objectivity of this idea to be demonstrated? Partly, it would appear, as being not repugnant either to reason or to experience; partly, again, by remaining the only possible supposition after the disproof of rival hypotheses. **M. Renouvier** has not left himself sufficient space to do justice to his demonstration, and therefore he is scarcely justified in claiming that it is "rigorously logical". He gives us an ideal of personality or of a higher self, but this is a far different result from that promised by the title of his article. It is by no means easy to write, within brief limits, a review of a review, for, nominally, this is the nature of the second article—that entitled 'La Philosophie de M. Paul Janet,' by **M. L. Dauriac**—indeed, it would be impossible, in this instance, were it not that the writer uses the recent appearance of a work by M. Paul Janet as a text for an interesting discussion of the present position of the followers of Cousin, or, as he calls them, the ecclectics. Modern Eccentricism does not merely hold that "all systems are right in what they affirm and wrong in what they deny," but also, owing to its historical connexion with Reid, it acknowledges the primacy of Psychological introspection, and it is therefore met by the consolidated opposition of all systems. Further, in admitting Belief, thinkers of this school, as **M. Dauriac** forcibly puts it, turn their backs upon Eccentricism, while if, on the other hand, they hold fast to their Psychology, they must abandon the hope of establishing a Metaphysic proper. In discussing the eccentric position with regard to the relation of Philosophy to other branches of knowledge, **M. Dauriac** introduces an important digression as to whether Philosophy is "a kind of abstract literature," remarkable for the prominence given to style, and the assertion that a comprehensive philosophical system is, in a peculiar degree, affected by great waves of emotion, which accelerate

the flow of thought, wherefore it is that "great philosophers are generally great writers" (p. 61). In reference to the relation of Philosophy to Theology (which M. Janet characterised as so close that hostility to Theology is treason to Metaphysics), **M. Dauriac** shows that Theology is taken in a narrow sense, as excluding all non-Christian religions. In this connexion, he makes a somewhat striking remark concerning the discordant elements in Ecclecticism, namely, the influence of the Cartesian spirit, which is Catholic, and the Scottish, which is Protestant—a contrast developed with considerable fulness. Under the heading of The Relation of Philosophy to Psychology, **M. Dauriac** urges, with great force, that a fact of consciousness or natural necessity is not, and cannot be, accepted as a principle. **M. Pillon's** contribution to his 'Evolution de l'Idéalisme au XIII^e Siècle' is entitled 'La Critique de Bayle : Critique de l'Atomism Épicurien,' and one cannot fail to note how little **M. Pillon** has left himself to say of Bayle's criticism of Epicurean Atomism—in fact, only a few pages are devoted to Bayle's objections, the bulk of the article being occupied with a statement of the general Epicurean position. The most important portion is that dealing with the "swerving aside" of the Atoms, which comes into contrast with the Idealism of last century as a contrasted yet not wholly dissimilar tendency. From the contingency involved in the swerving aside of the Atoms, the Epicurean developed Free-Will; while, on the contrary, the Idealist deduces contingency from freedom. At the same time, it is difficult to see how this contrast, or, indeed, the statement of Epicureanism, applies to **M. Pillon's** subject, since Bayle only accepted certain portions of that theory under a misapprehension, and it would appear that Epicurean Atomism, not being understood during last century, could have little to do with the development of thought. Yet **M. Pillon's** present contribution is of distinct value as an appendix to the preceding chapters, in giving additional information, which, if incorporated earlier, would have involved lengthy digressions. There is no doubt **M. Pillon** has done good work in drawing attention to Bayle's constructive work, but its importance is exaggerated by being brought too near to Leibnitz and too far from Descartes, and thus the true historical perspective is in danger of being lost. When allowance is made for Bayle's eclectic tendencies, it would appear that his position should be moved forwards or backwards in the historical sequence, according to the aspect of his subject a writer has before him at the moment. He marks a development of Cartesianism opposed to that of Spinoza, who placed the centre of gravity in the supreme substance, whereas Bayle is inclined to place it in the two subordinate ones. Thus he emphasises rather than surmounts Cartesian Dualism, and therefore his "spiritualism" must be held to be less, not more, than that of other Cartesians. If, on the other hand, we look back from the individualism of Philosophy, immediately prior to Hume, we see in Bayle's Plurality of animated atoms an advance upon his contemporaries; but it may be doubted whether this advance falls within the development of Idealism; rather, despite the superficial resemblance to Leibnitz, the many realistic characteristics of the Atoms (especially when brought into juxtaposition with the Locke-Worcester Letters and Voltaire's popularisation of Locke) would tend more in the direction of realistic than of Idealistic Individualism.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE.
Bd. xix., Heft 1. **T. Lips.** 'Tonverwandschaft und Tonverschmelzung.' [Polemie against Stumpf's theory in the *Beiträge*. Degree of fusion for Stumpf is not really degree of approximation to a (numerical) unity of auditory impression, but degree of possibility or ease of such

approximation. Proof by appeal to unmusical persons, and to consonance of successive tones. But if consonance or degree of fusion is 'fusibility,' that relation of tones to one another which conditions fusion, there need be no quarrel between the two theories. Stumpf's synergy, invented *ad hoc*, makes way for the hypothesis that consonance is an unconscious coincidence manifesting itself in conscious satisfaction. Detailed discussion of Stumpf's counter-arguments.] **W. von Zehender.** 'Die unbeweisbaren Axiome.' [We learn the axioms in childhood; we accept them later because of their invariable fulfilment. They are 'apodictically' demonstrable, *i.e.*, capable of a *demonstratio ad oculos*, and only logically indemonstrable. The meaning of every word depends on an implicit judgment of invariability.] **A. Poetsch.** 'Ueber Farbenvorstellungen Blinder.' [Introspective record, with comparisons, by a subject blind from her third year. Colours remain as memory images, with well-marked affective differences. There then occurs a transference of them, by feeling association, to other contents. Conscious memories of coloured scenes are wanting, and surrogate ideas take their place. Clangs are most easily associated with the colour-images; pressure holds second place; temperature associations are rare, and movement associations unknown to the writer. Smell may connect with colour through touch; taste associations are doubtful. There are great individual differences among the blind in the matter of colour images; many combat them of set purpose, as useless in practical life.] **J. von Kries.** 'Ueber die anomalen trichromatischen Farbensysteme.' [Experiments to show that the anomalous trichromatic systems are not explicable as due to unusually intense and widely extended pigmentation. In the two cases reported, no weakness of the colour sense was found.] Literaturbericht. Bd. xix., Heft 2 und 3. **S. Witasek.** 'Ueber die Natur der geometrisch-optischen Täuschungen.' [Attempts, not to give a new explanation, but to bring out the essential difference between the 'psychological' and the 'physiological' modes of explanation. Critique of Wundt, Einthoven, Stoehr. The judgment hypothesis (psychological explanation): neither the judgment of comparison nor that of designation (the two forms involved) is adequate to the facts of illusion. The sensation hypothesis (or perceptual idea hypothesis: physiological explanation), and its relation to the apprehension of two-dimensional space. Experiments: Stereoscopic examination of Zoellner's illusion; the question of subliminal displacements. Result: This and cognate illusions are 'physiological,' not 'psychological,' in origin.] **J. von Kries.** 'Kritische Bemerkungen zur Farbentheorie.' [Criticism of recent papers by Hering, Hess and Tschermak.] **W. von Zehender.** 'Vernunft, Verstand und Wille.' [Reason, through the mediation of sense, furnishes us with knowledge; understanding discovers likenesses and differences, and points them out to reason. Will is the executive of both faculties, and is shaped by experience. Illustration from the child's acquisition of speech, and of the power to read and write.] Besprechung. **T. Ziehen.** 'Kritischer Bericht ueber wichtigere Arbeiten auf dem Gebiete der Physiologie des Centralnervensystems der Wirbelthiere.' Literaturbericht.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. August, 1898. **Rudolf Eucken.** 'Die Stellung der Philosophie zur religiösen Bewegung der Gegenwart.' [This has already appeared in French in the *Revue de Métaphysique et de Morale* for July, 1897.] **H. Siebeck.** 'Die Willenslehre bei Duns Scotus und seinen Nachfolgern.' [A plain historical account of the teaching of the School on the will and its freedom during that period which is miscalled "the decline of Scholasticism".]

Notwithstanding the numerous passages suggestive of modern thought, Prof. Volkelt avoids all such comparisons, giving only the data for the thesis that the germs of our modern doctrines are to be found in the teachings of Duns Scotus, Occam, and Buridan. The essay represents an immense amount of reading.] **Johannes Volkelt.** 'Beiträge zur Analyse des Bewusstseins.' [The distinguishing (and misrepresented) mark of sensation is trans-subjectivity,—the seeming independence of consciousness, the "beyondness" always present in sense-impressions. Spencer violates his own empiricism in ascribing to sensation originally a meaning in inner consciousness only, and treating its apparent independence as a gradual growth. In *experience* sensation is never merely internal, nor of an alleged growth of the illusion can we have experience. Further, sensation prior to or without this trans-subjectivity would no more be sensation than a triangle would continue a triangle if a side were removed. On the other hand, there must be no confusion with Natural Realism; where Hamilton (or German equivalents) say the non-ego *is* given, the purely psychological position here maintained is that the non-ego *seems* to be given in sensation. This illusion may be termed the irrational element in consciousness in the sense that human finiteness cannot conciliate the illusion with reason. Thus, in opposition to the teachers of Parallelism, consciousness appears as a manifold of simple, qualitatively different, underivative functions. The conclusion treats of the connexion of the trans-subjective element with the ideas of space and of the external world.] **Gregor von Glaserapp.** 'Duplicität in dem Ursprung der Moral.' [On the one hand, the rational element of morality lies in the idea of justice and retribution; on the other hand, above and beyond reason, is the astounding fact that moral actions are performed regardless of recompense, regardless of self-interest. The article traces the influence of this second constituent in the religions of the Greeks and eastern nations and in Christianity.]

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE. Jahrg. xxiii., Heft 1. **J. v. Kries.** 'Zur Psychologie des Urteils.' [The author starts with his distinction between real and relational judgments, which corresponds closely with Hume's distinction between relations of ideas and matters of fact. Each of these classes of judgment involves a distinctive consciousness of validity. The object of the present article is to distinguish further varieties of the validity-consciousness, as they occur in the manifold processes of actual thinking, and to connect these with the main logical types of judgment. The article is interesting and important, but its value lies in detail which cannot be reproduced in a summary.] **E. Posch.** 'Ausgangspunkte einer Theorie der Zeitvorstellung, I.' [Discusses the nature of past time. When we say that something is past, the meaning is always that some quality in a group of qualities has ceased to belong to that group. Pastness is the non-existence of what is past.] **P. Barth.** 'Die Frage des sittlichen Fortschritts der Menschheit.' [Disputes the thesis of Buckle that ethical principles and ethical sentiments are unalterable. There is a progress in the direction of recognising the autonomy of the individual. We must distinguish between the development in the nature of ethical principles and sentiments, and the intensity of the controlling influence which they exercise under given social conditions. This controlling influence, which may be identified with conscience, shows a more or less regular rise and fall. The present period is one of decline, but there is good hope for the future, based largely on the help to be expected from science and in particular from sociology.] Besprechungen, etc.